REPORT RESUMES

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TEACHER'S MANUAL FOR REVIEW, EXPANSION OF TRANSITIVE VERBS, DETERMINERS, MORE ABOUT QUESTIONS, AND THE NEGATIVE. LANGUAGE CURRICULUM III.

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SUGGESTIONS WERE OFFERED IN THIS TEACHER'S GUIDE FOR VARIOUS APPROACHES IN REVIEWING GRAMMAR PREVIOUSLY PRESENTED TO NINTH-GRADE STUDENTS. THE GRAMMAR REVIEW COVERED PHRASE STRUCTURE RULES, TRANSITIVE VERBS, DETERMINERS, INTERROGATIVES, AND NEGATIVES. WHILE THE EXERCISES IN THE STUDENT VERSION WERE MEANT TO BE WRITTEN, THE TEACHER'S GUIDE CONSISTENTLY SUGGESTED ORAL DISCUSSION AND VISUAL DEMONSTRATION BY THE TEACHER TO DETERMINE HOW MUCH STUDENTS REMEMBER FROM PREVIOUS COURSES AND WHERE THEY WOULD PROBABLY NEED HELP. THE PURPOSE OF THE REVIEW, AS WELL AS THE LEARNING EXERCISES, WAS NOT ONLY TO HAVE THE STUDENTS GAIN AN UNDERSTANDING AND AN APPRECIATION FOR THE COMPLEXITIES OF GRAMMAR, BUT TO HAVE THE STUDENTS REALIZE THAT UNDERNEATH THE COMPLEXITIES THERE ARE QUITE SIMPLE GENERALIZATIONS WHICH ACCOUNT FOR THEM. THE STUDENT VERSION IS ED 010 829. RELATED REPORTS ARE ED 010 129 THROUGH ED 010 160 AND ED 010 803 THROUGH ED 010 832. (PM)

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OREGON CURRICULUM STUDY CENTER

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9 **Language Curriculum III**

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LANGUAGE III

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Teacher Version

REVIEW UNIT FOR LANGUAGE III

This is an interim unit which may be useful to teachers of classes which, having completed the material of Language I and II, are presumably ready to begin with Language III. The assumption is that the students have an understanding of the Phrase Structure Rules and of the Passive, Question, Conjunctive, and Adjective and Possessive embedding transformations. The diagnostic test at the beginning is designed to help teachers determine how much their students remember and what reviewing they need to do before progressing to the units of Language III. It should be particularly useful at the beginning of the school year, when students may have forgotten a good deal over the summer and when the students in a class may have varying backgrounds in the grammar.

Teachers who plan to begin Language III in the middle of the year may not need this unit, and if their students have a good grounding in the Phrase Structure Rules and the principles of transformation they should be able to go into the first unit of Language III--"Expansion of Transitive Verbs"--with no review. The teacher should decide whether the class needs some, all, or none of the unit, and should adapt it to the needs of the class.

If it is used, it will be necessary for the teacher to have a copy of the material of Language II, and it would, of course, be ideal if students could also have access to the material since the review exercises to which they are referred are in the units of Language II.

Exercise 1: Review and Diagnostic Test, p. 1:

Probably the most useful way to use this exercise, perhaps after students have had an opportunity to look it over, is to work out each sentence with the class on the board (or overhead projector). This would be particularly true when it is being used with students who have had a long absence from the grammar or who may vary in their understanding and background. Left to themselves, such students may be frustrated by the exercise, but it could be an excellent teaching device if it were worked out slowly, and with discussion, with the teacher. Most of the concepts of the grammar of the earlier years are included in the sentences, and by working through each one with the class, the teacher will have an opportunity, not only to discuss each concept, but to determine from the discussion how much the students really do remember. She should also be able to evaluate the depth of their understanding and ability. For example, most students will probably be able to recognize rolled, in sentence 4, part A, as an intransitive verb, but whether they will also perceive that it is a special kind of intransitive--one which requires a directional adverb--can be determined by the discussion.

Working through the sentences in this way will probably take a number of class meetings, but if each sentence is thoroughly discussed, it should constitute a fairly comprehensive review.

A. 1. Sally wore a blue dress at the party last night.

Kernels-- NP + Tns + V_{tr} + NP^2 + Loc + Tm
Sally wore a dress at the party last night.
NP + Tns + Be + Adj
A dress was blue. $\Rightarrow$

Embedded Adjective Clause

NP + Tns + Vtr + NP^2 + wh-NP + Tns + Be + Adj + Loc + Tm
Sally wore a dress which was blue at the party last night. $\Rightarrow$

Deletion

NP + Tns + Vtr + NP^2 + Adj + Loc + Tm
*Sally wore a dress blue at the party last night $\Rightarrow$

#Repositioning the adjective

NP + Tns + Vtr + T + Adj + N + N^o + Loc + Tm
Sally wore a blue dress at the party last night.

(# When the adjective is repositioned it enters the noun phrase between the determiner and the noun. Thus in this step it is necessary to write NP as T + N + N^o).

2. The frightened child sobbed noisily.

Kernels-- NP + Tns + V_{in} + Man
The child sobbed noisily
NP + Tns + Be + Adj
#The child was frightened $\Rightarrow$

Embedded adjective clause

NP + wh-NP + Tns + Be + Adj + Tns + V_{in} + Man
The child who was frightened sobbed noisily $\Rightarrow$

Deletion

NP + Adj + Tns + V_{in} + Man
The child frightened sobbed noisily $\Longrightarrow$

Repositioning of adjective

#T + Adj + N + N^{o} + Tns + V_{in} + Man
The frightened child sobbed noisily.

(# *Frightened* is an example of a derived adjective. That is, it really comes from the past participle of the verb *frighten*. In a later year we will treat such adjectives and account for the difference which obviously exists between an adjective like *tall* and one like *frightened*. For your own information, and in case you have some bright students who become curious about it, you may like to know that to derive it from the verb requires the following steps:

Kernels-- NP + Tns + V_{in} + Man
The child sobbed noisily

NP + Tns + Vtr + NP^{2}
#(Someone) frightened the child $\Longrightarrow$

Passive transformation

NP^{2} + Tns + be + en + Vtr + by + NP
The child was frightened by (someone) $\Longrightarrow$

# Deletion

NP^{2} + Tns + be + en + Vtr
The child was frightened $\Longrightarrow$

Embedded Adjective clause

NP + wh-NP + Tns + be + en + Vtr + Tns + V_{in} + Man
The child who was frightened sobbed noisily $\Longrightarrow$

Deletion

NP + en + Vtr + Tns + V_{in} + Man
*The child frightened sobbed noisily $\Longrightarrow$

#T + en + Vtr + N + N^o + Tns + V_{in} + Man

The frightened child sobbed noisily.

In the final step, when frightened is repositioned, it is necessary, of course, to place it between the determiner and the noun. See the explanation for sentence number 1. For a discussion of someone see the note to #6 below.

3. That accident was caused by the landslide.

Kernel-- NP + Tns + V_{tr} + NP^2 $\Longrightarrow$

The landslide caused that accident

Passive transformation

NP^2 + Tns + be + en + Vtr + by + NP

That accident was caused by the landslide

4. The football rolled into the street.

Kernel-- NP + Tns + V_{id} + Dir

The football rolled into the street

5. Mary's father became tired easily.

Kernels-- #NP + Tns + Vlac + Man + Adj

The father became easily tired

NP + Tns + have + NP $\Longrightarrow$

Mary had the father

#Embedding of a have clause

NP + wh-NP + NP + Tns + have + Tns + Vlac + Man + Adj $\Longrightarrow$

The father whom Mary had became easily tired

Deletion

NP + NP + Tns + have + Tns + V_{lac} + Man + Adj $\Longrightarrow$

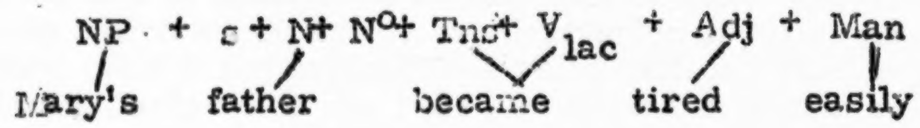
The father Mary had became easily tired

Formation of possessive

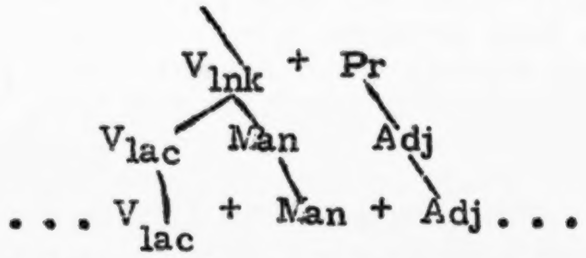
NP + s + N + N^o + Tns + V_{lac} + Man + Adj $\Longrightarrow$

Mary's father became easily tired

Repositioning the manner adverb



(#This sentence, of course, contains one of the subclasses of linking verbs which can occur with manner adverbs. They were symbolized as Vlac in Language II. Because the manner adverb occurs with the linking verb it appears in the kernel string right after it,

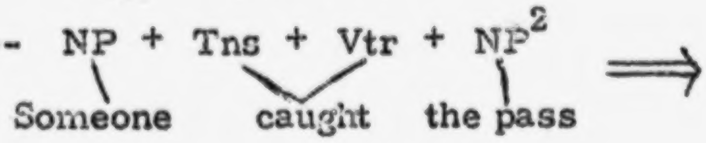


and the predicate adjective follows. This will be repositioned later.

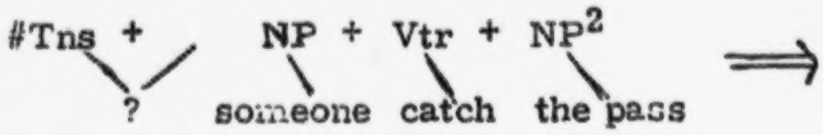
Embedding of sentences of the form NP + Tns + have + NP was developed as the source of possessives in Language II. It is really a kind of embedding of an adjective clause, part of which then becomes the possessive. In so doing it takes the place of the determiner. The father + Mary + has ⟹ Mary's father)

#6. Who caught the pass?

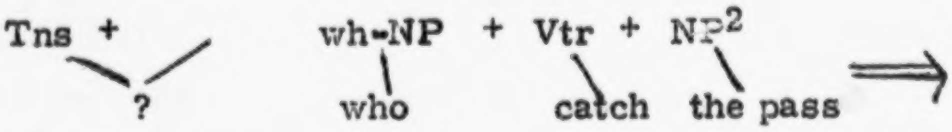
Kernel--



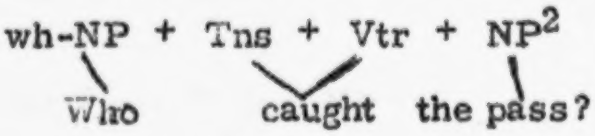
Yes-or-no question



wh-attachment



T wh (Subject question)



(#The unit on the question transformation in Language II left the subject question until the end and suggested that it might be an optional part of the unit at that time. At first it seems to present certain problems if we are to treat it as an example of the general--and powerful--rule which accounts for the derivation of all questions in the same way. But if the principle is valid that one rule is preferable to two, particularly when one rule can show a powerful relationship between many kinds of sentences, we must treat it this way.

Actually, the problem presented by the who (or subject) question is fairly simple when analyzed. It involves the fact that the do-support transformation must be applied after the other transformations. But since this involves working with the underlying structure in an abstract way, perhaps not many of your students have studied it. Perhaps this is the time to go back and teach the section on the subject question. You should use your own judgment of your students' abilities and their reaction to this sentence to decide whether you wish to discuss it at this time. The whole matter will be discussed again in the unit on questions which comes later in Language III.

This sentence again presents the necessity of supplying a word for the NP in the kernel. Since we don't know who caught the pass we can use someone (or your students may want to supply an optional noun.) Actually there is an advantage in their beginning to think of these elements as the indefinite someone or something, because this concept will be built on in material in later years.

In the yes-or-no question we have not supplied do, for the reason discussed above.

7. How did you like the dessert?

Kernel-- NP + past + V_{tr} + NP^2 + Man $\Longrightarrow$
You liked the dessert (fine, or in some manner)

Yes-or-no question

#past + do + NP + V_{tr} + NP^2 + Man $\Longrightarrow$
Did you like the dessert (in some manner)

wh-attachment

Past + do + NP + V_{tr} + NP^2 + wh-Man $\Longrightarrow$
Did you like the dessert how?

How-question (T_{wh})

wh-Man + past + do + NP + V_{tr} + NP^2
How did you like the dessert?

(#In this sentence it doesn't make any difference when the do is added. It may be simpler to let students add it at this point. However, eventually they will have to be persuaded of the importance of adding it after all the other steps in the transformation have been carried out. Use your own judgment based on the ability of your class. If you have tackled it in sentence 6 it should present no problems here.)

8. #We must scrub and wax the floors before dinner.

Kernels--NP + Tns + M + V_{tr} + NP^2 + Tm
We must scrub the floors before dinner

NP + Tns + M + V_{tr} + NP^2 + Tm ⇒
We must wax the floors before dinner

Verb conjunctions

NP + Tns + M + V_{tr} + and + V_{tr} + NP^2 + Tm
We must scrub and wax the floors before dinner.

(#When you are working out this sentence it might be a good time to review the conditions under which a conjunction can be made: when the elements which are joined derive from the same point in the diagram--for instance, V_{tr} in this sentence--and the other parts of the two sentences are identical.)

9. What are they dancing?

Kernel NP + Tns + be + ing + V_{tr} + NP^2 ⇒
They are dancing (something)

Yes-or-no question

Tns + be + NP + ing + V_{tr} + NP^2 ⇒
Are they dancing (something)

wh-attachment

Tns + be + NP + ing + V_{tr} + wh-NP^2 ⇒
*Are they dancing what?

Object question (T_{wh})

wh-NP + Tns + be + NP + ing + V_{tr}
What are they dancing?

A. 10. Bruce speaks softly but distinctly.

Kernels--NP + Tns + V_i + Man
Bruce speaks softly

NP + Tns + V_i + Man
Bruce speaks distinctly

⟹

Manner adverb conjunction

NP + Tns + V_i + Man + but + Man
Bruce speaks softly but distinctly

B. 1. Wind and rain cause erosion.

Kernels NP + Tns + V_{tr} + NP^2
Wind causes erosion

NP + Tns + V_{tr} + NP^2
Rain causes erosion

⟹

Subject conjunction

NP + and + NP + Tns + V_{tr} + NP^2
Wind and rain cause erosion

2. We dissected the frog which was sick.

Kernels NP + Tns + V_{tr} + NP^2
We dissected the frog

NP + Tns + Be + Adj
The frog was sick

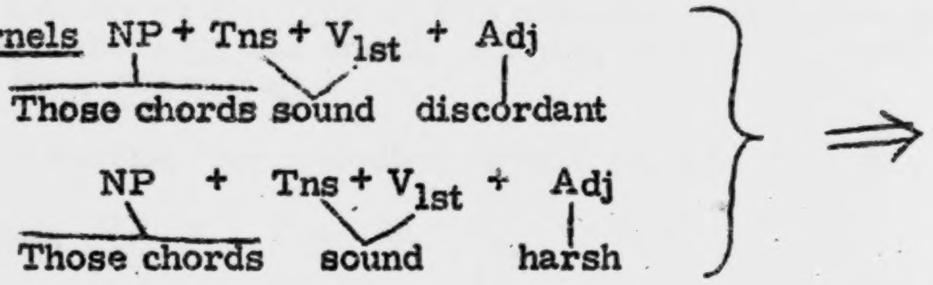
⟹

Adjective clause embedding

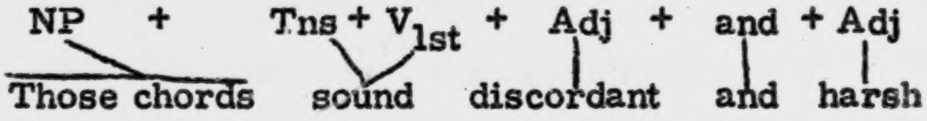
NP + Tns + V_{tr} + NP^2 + wh-NP + Tns + Be + Adj
We dissected the frog which was sick

3. Those chords sound discordant and harsh.

Kernels

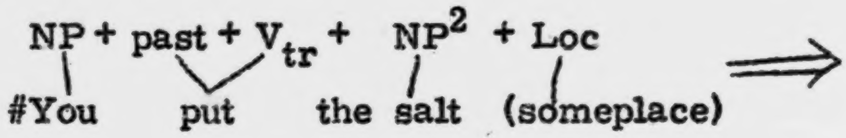


Predicate conjunction

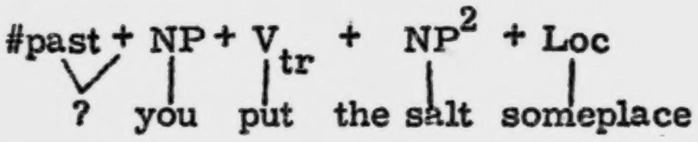

NP + Tns + V1st + Adj + and + Adj
Those chords sound discordant and harsh

4. Where did you put the salt?

Kernel



Yes-or-no question



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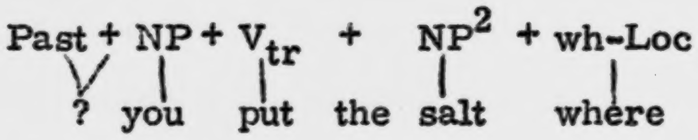
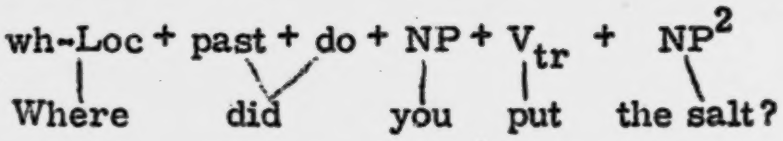


Where question (T_{wh})


wh-Loc + past + do + NP + Vtr + NP2
Where did you put the salt?

(#As in sentences 2, 6, 7, and 9 in part A, we have an element here for which we don't know the word in the underlying kernel. Where tells us that an adverb of place existed in the kernel. Some students may recognize that the verb put actually takes a special kind of place adverb known as the adverb of direction (Dir). In the next unit they will study the class of V_{tr} that take Dir but at this time V_{tr} + Loc is an acceptable classification for this sentence. We know that the salt was put someplace, but we don't know exactly which place. Therefore, in reconstructing the kernel you can use the indefinite someplace, or you can allow your students to supply an optional place, such as on the shelf.

Again you must decide whether to add do in the yes-or-no transformation or wait until after completing the other transformations. In this sentence it doesn't make any difference, but you must be aware here, as in earlier questions of this exercise, that this is the final step in the process, and sometimes it does make a difference.

We have usually written Tns in this exercise rather than past or present, except where do was added; but you, of course, understand that it can be done either way.)

5. Mr. Edwards, the custodian, should replace the light.

Kernels NP + Tns + M + V_{tr} + NP^2
Mr. Edwards should replace the light
NP + Tns + Be + NP
Mr. Edwards is the custodian ⟹

Adjective clause embedding

NP + wh-NP + Tns + Be + NP + Tns + M +
Mr. Edwards who is the custodian should
V_{tr} + NP^2
replace the light ⟹

Deletion

NP + NP + T + M + V_{tr} + NP^2
Mr. Edwards, the custodian, should replace the light

6. The Mustang crashed through the barricade and into the ditch.

Kernels NP + Tns + V_i + Dir
The Mustang crashed through the barricade
NP + Tns + V_i + Dir
The Mustang crashed into the ditch ⟹

Adverb conjunction

NP + Tns + V_i + Dir + and Dir
The Mustang crashed through the barricade and into the ditch

7. Miss Ormsley teaches math and science.

Kernels NP + Tns + V_{tr} + NP^2
Miss Ormsley teaches math
NP + Tns + V_{tr} + NP^2
Miss Ormsley teaches science ⟹

Object (NP^2) embedding

NP + Tns + V$_{tr}$ + NP^2 + and + NP^2
Miss Ormsley teaches math and science

The key to exercises 2-15 is found in the teacher's manuals to Expansion of Phrase Structure Rules and Single-Base Transformations and Double-Base Transformations. You will be assigning them as needed.

Exercise 16, p. 4:
Answers will vary for this exercise, but they could be like the following.

A. 1. S$_1$ and S$_2$
The rain fell all night and the river crested at flood stage.

2. . . . NP + which + NP^s + Aux + have. . .
Gary drove the car which Father has.

3. . . . T + Adj + N + N^{oc}
I own a blue car

4. NP$_1$ + who + Aux + Be + Pr . . .
The man who was the judge fell asleep.

5. . . . Tm$_1$ + and + Tm$_2$
We will practice today and tomorrow.

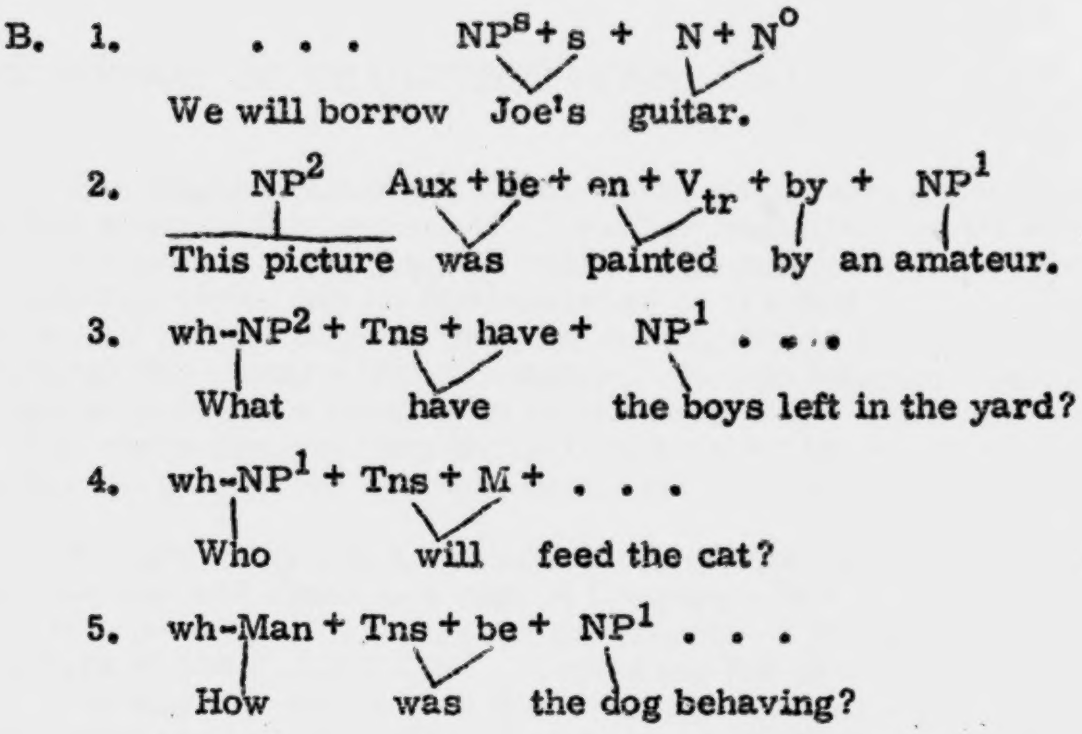
6. . . . V$_{tr1}$ + NP^2 + V$_{tr2}$ + NP^2
The halfback has grabbed the ball and made the touchdown.

7. . . . NP$_1^2$ + and + NP^2
He was eating bread and cheese.

8. . . . + VP$_1$ + and + VP$_2$
The girls rang the bell and walked into the house.

9. NP$_1$ + and + NP$_2$ . . .
Laurel and Hardy were famous comedians.

10. . . . Dir$_1$ and Dir$_2$
The trackmen ran down the road and across the field.



B. 1. . . . $NP^s + s$ + $N + N^o$

We will borrow Joe's guitar.

2. NP^2 Aux + be + en + V_{tr} + by + NP^1

This picture was painted by an amateur.

3. wh-NP^2 + Tns + have + NP^1 . . . .

What have the boys left in the yard?

4. wh-NP^1 + Tns + M + . . .

Who will feed the cat?

5. wh-Man + Tns + be + NP^1 . . .

How was the dog behaving?

The six sentences on page 5 are included to arouse the student's curiosity. He will not, on the basis of information he now has, be able to write symbol strings for the sentences, for each contains elements which have not been discussed. We hope they will serve to isolate various constructions which will be developed in the units to follow.

EXPANSION OF TRANSITIVE VERBS

The Phrase Structure Rules which were formulated in early years of the study of this grammar classified transitive verbs as one of the major classes of the English verb. The rules developed the notion that transitive verbs can be distinguished by the fact that they are followed by an NP (direct object), may be modified by a manner adverb, and can undergo the passive transformation. But no attempt was made to distinguish between a number of subclasses of the transitive verb, all of which share the common characteristics we have just pointed out, but differ in many other respects from each other.

We now return to a consideration of this verb class and will try in this unit and again in a unit in Language IV to distinguish some of the subclasses. Obviously not all transitive verbs are alike. How can we explain the differences? In teaching the unit you should be concerned with leading the students to discover the distinctions themselves whenever this is possible. The exercises are designed with that goal in mind, and the students should be encouraged to ask questions (and to try to answer them) about differences they note between the different classes. In this way they will hopefully gain some understanding of, and appreciation for, the complexities of a single class of verbs and also a growing realization that underneath the complexities there are quite simple generalizations which can account for them. Remember that the aim is not to make students memorize rules but to help them understand their language. If they do this the generalization (which are the rules) will become more and more obvious to them.

The verbs discussed in this unit are all composed of transitive verbs plus other elements without which they are incomplete. Specifically we will be concerned with those verbs which take indirect objects, those which occur with directional adverbs, those which have particles, and those which occur with prepositions. In the work for the following year we will add to the list of this kind of verb those transitive verbs which require complements. The symbols which are used for the various subclasses and examples of each follow:

V_{tio} + IO Peter gave a necklace to his sister.
(IO stands for indirect object)

V_{tdir} + Dir The assassin drove the knife into the king.
(Dir, of course, stands for directional adverb)

V_{tprt} + Prt The man threw the coffee out.
(Prt stands for particle)

V_{tprep} + Prep They talked about rockets.
(Prep stands for preposition)

V_{tC} + Comp The public elected Johnson President.
(Comp stands for complement)

A moment's reflection should prove that verbs like the ones used in these examples are incomplete without the additional element which is underlined. We don't give without giving something to someone. We don't throw something without throwing it someplace. We don't talk something; we talk about something. And if we elect someone we elect him to be something. Whether expressed or not the elements which occur with these particular kinds of transitive verbs are necessary to complete the verb. Our task is simply to try to define which verbs need these elements and to describe how they are generated.

For reasons of simplicity all sentences containing transitive verbs are described as $NP^1 + Aux + V_{tr} + NP^2$. There would be no point in using a more detailed description because this one is adequate to describe a great many facts, all those which we want to deal with at this time. For example, this very general description leads to a quite simple formulation of the passive transformation because it includes all the elements necessary for such a transformation. Moreover, this description allows us the intuitively satisfying opportunity to select structurally (and semantically) complementary items at the same point in the derivation of a sentence. That is, it makes it possible to account for each of the special subclasses of transitive verbs and the items which appear with them (those we listed above) in exactly the same way--as a rewrite of V_{tr}. Or to put it another way, we can say they all derive from V_{tr}. Thus a general principle can be found to account for a great many facts.

Let us illustrate. There is no sentence
*They put a key

Put must have a structure to complete it, and the kind of structure which will complete it is an adverb of direction. This structure is most simply# introduced as part of the rewrite of a single unit, V_{tr}.

$$V_{tr} \longrightarrow V_{tdir} + Dir$$

However, introducing it as a part of the rewrite of V_{tr} has the effect of producing an ungrammatical string, like *They put into the lock the key.

To correct this situation we must invest in a simple transformation which inverts NP^2 and into the lock (They put the key into the lock). But this transformation is a profitable one, because it can be shown to be a very general rule. With slight modification, it applies to the second

---

#You can discover for yourself why it is simpler to introduce the added structures of this class of verbs as part of the verb itself--that is as a rewrite of V_{tr}--rather than as a part of some other element in the sentence. If you were to try to account for it as part of NP^2, for instance, you would discover that you would need to write additional context sensitive rules to show why it occurs with some NP^2's and not others. Actually it is the verb itself which determines the appearance of the element which completes it, even though that element is placed after the direct object.

part of each of the two-part rewrites of V_{tr} except V_{tprep} + Prep. For instance

I gave the bracelet

needs a structure to complete it as do

I asked a question
I baked a cake.

Though these added structures may often be deleted, they are present in the underlying sentence. The structures added to verbs of this kind are, of course, indirect objects and they include the prepositions of, to, or for. (IO → prep + NP^3#). So if this structure is added to the verb as a rewrite of V_{tr} we will get sentences like

*I gave to the girl the bracelet.
*I asked of the teacher a question.
*I baked for Jim a cake.

which are ungrammatical. The option then exists of going through a simple transformation which inverts NP^2 and the added element or, if the sentences do not go through the transformation, of deleting the prepositions. So the sentences become either

I gave the bracelet to the girl.
I asked a question of the teacher.
I baked a cake for Jim.

or

I gave the girl the bracelet.
I asked the teacher a question.
I baked Jim a cake.

Sentences with particle verbs (V_{tprt} + Prt) emerge from the P.S. rules in a grammatical order, but may be rearranged by the transformation which inverts NP^2 and the added element.

He threw out the coffee
or
He threw the coffee out.

Sentences with verbs requiring prepositions (V_{tprep} + Prep) emerge in a grammatical order but may not be rearranged.

He looked at the pictures.
but not
*He looked the pictures at.

So by considering all of these subclasses of transitive verbs as two-part rewrites of the verb we can make use of a single transformation

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#NP^3 is simply a device to distinguish NP's which are indirect objects from those which are subjects or direct objects.

to produce grammatical sentences. In each case but one the complementary element and NP^2 are inverted.

In its general form the rule would look like this:

T_{verb} separation

$$\ldots \left\{\begin{matrix} IO \\ Dir \\ Prt \\ Comp \end{matrix}\right\} \ldots + NP^2 \ldots \Longrightarrow$$

$$\ldots NP^2 + \left\{\begin{matrix} IO \\ Dir \\ Prt \\ Comp \end{matrix}\right\} \ldots$$

(optional for IO and Prt, but obligatory otherwise)

As you see, the various two-part expansions of the V_{tr} can be partly distinguished in their relationship of this verb separation transformation.

V_{tprep} + Prep does not go through it at all.

V_{tio} + IO and V_{tprt} + Prt may go through it.

V_{tdir} + Dir and V_{tC} + Comp# must go through it.

V_{tr} + Prep or V_{in} + Prep?

A problem may arise in deciding whether to consider certain combinations of "verb" + prep as two-word transitive verbs or as intransitives + prep. The determining factor is again simplicity. This to do with the difficulty of limiting the selection of prepositions, among other things. Flirt, for example, may be followed only by one preposition, with. That limitation is most easily accomplished if with is simply selected as an indispensable part of a V_{tr}, along with flirt. The verb does require with for completeness. Similarly with on and depend, to and object. The restrictions are not always this narrow, but they are always narrow.

The verbs in this unit, and the simple rules used to explain them, illustrate a fundamental criterion of language theory--that the explanations be simple and that they be adequate. A great many sentences which might appear unrelated have been shown to be very closely related structurally by the use of two rules, one a phrase structure rule, one a transformation.

Because each of the verb classes discussed in this unit has a limited

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#V_{tC} + Comp falls in this class also. It will not be discussed, however, until a later time, because an additional element is involved in complement verbs: an embedded source sentence.)

number of verbs, the possibilities for sentences in exercises is limited. However, we have attempted to include an ample number. Feel free to use what you need--which may not be all of them.

ANSWERS TO EXERCISES

Exercise 1, page 6:

Sentences 1, 2, 3, 4, and 7 can be made passive, and each contains a transitive verb. Sentence 5 contains V_{mid}, sentence 6 contains be, and sentence 8 is discussed fully in the text.

Exercise 2, page 6-7:

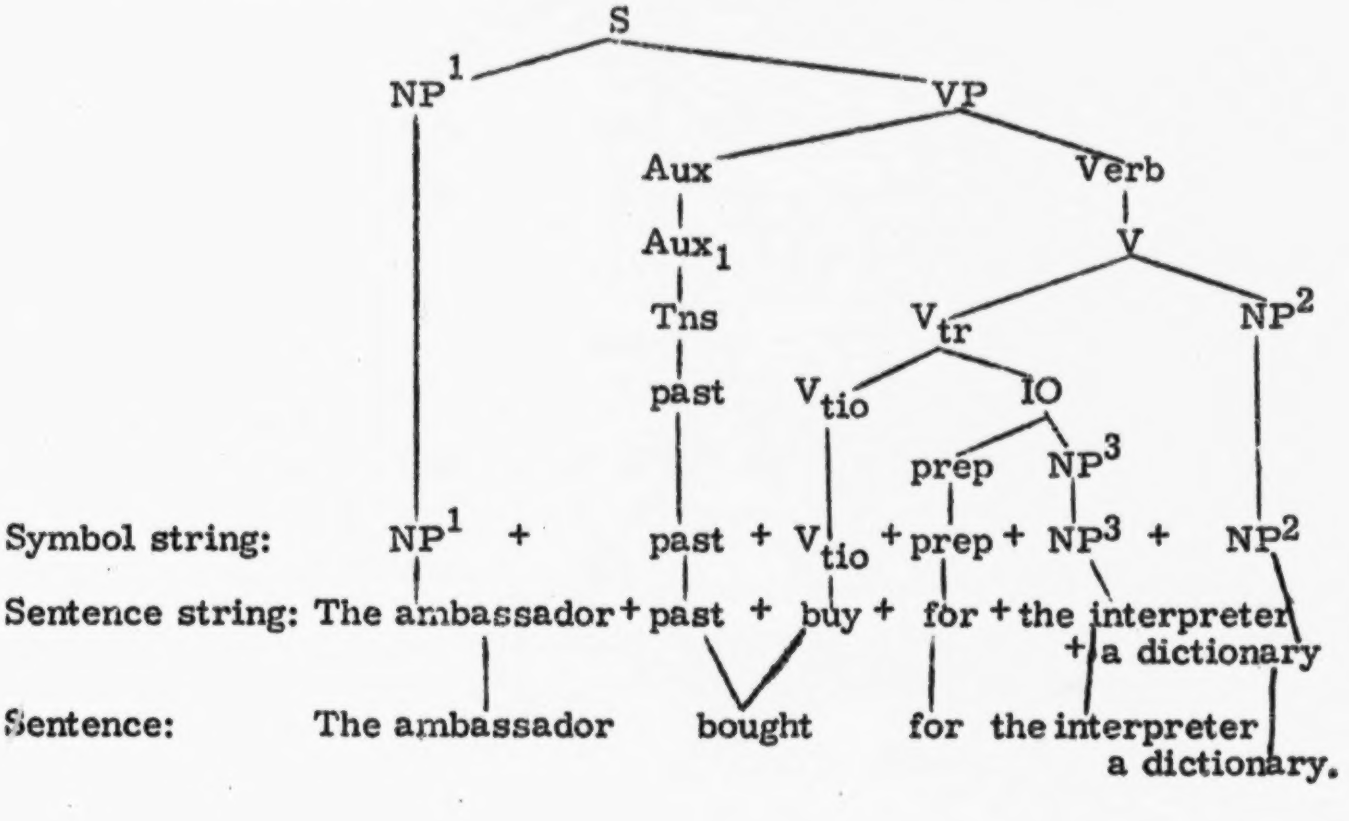
All ten sentences can be made passive, and each contains a transitive verb. Sentences 1, 3, 4, 8, 9, and 10 are different in that they may be made passive in two different ways. That is, these sentences have two objects following the verb. For example, sentence #1 has these two possible passive constructions:

> The team was awarded a trophy by the superintendent.
> A trophy was awarded the team by the superintendent.

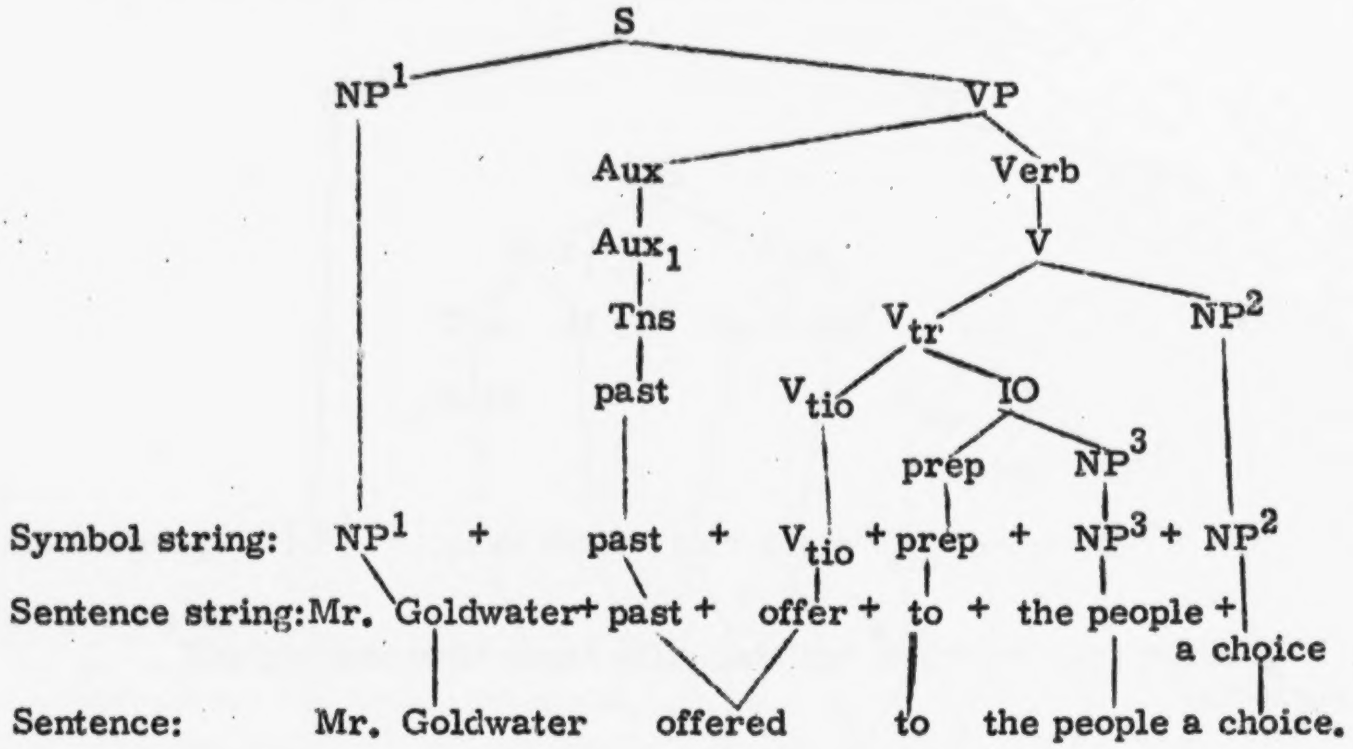
Exercise 3, page 10:

Part A: In this set, the phrase structure rules produce ungrammatical kernel sentences which are transformed into grammatical ones in Parts B and C of this exercise. You should use your own judgment about allowing students to skip from Verb to VP. By this time many students will understand that some intervening steps have been left out, but if they have trouble identifying transitive verbs perhaps you should require them to work through the steps Vrb and Vb.

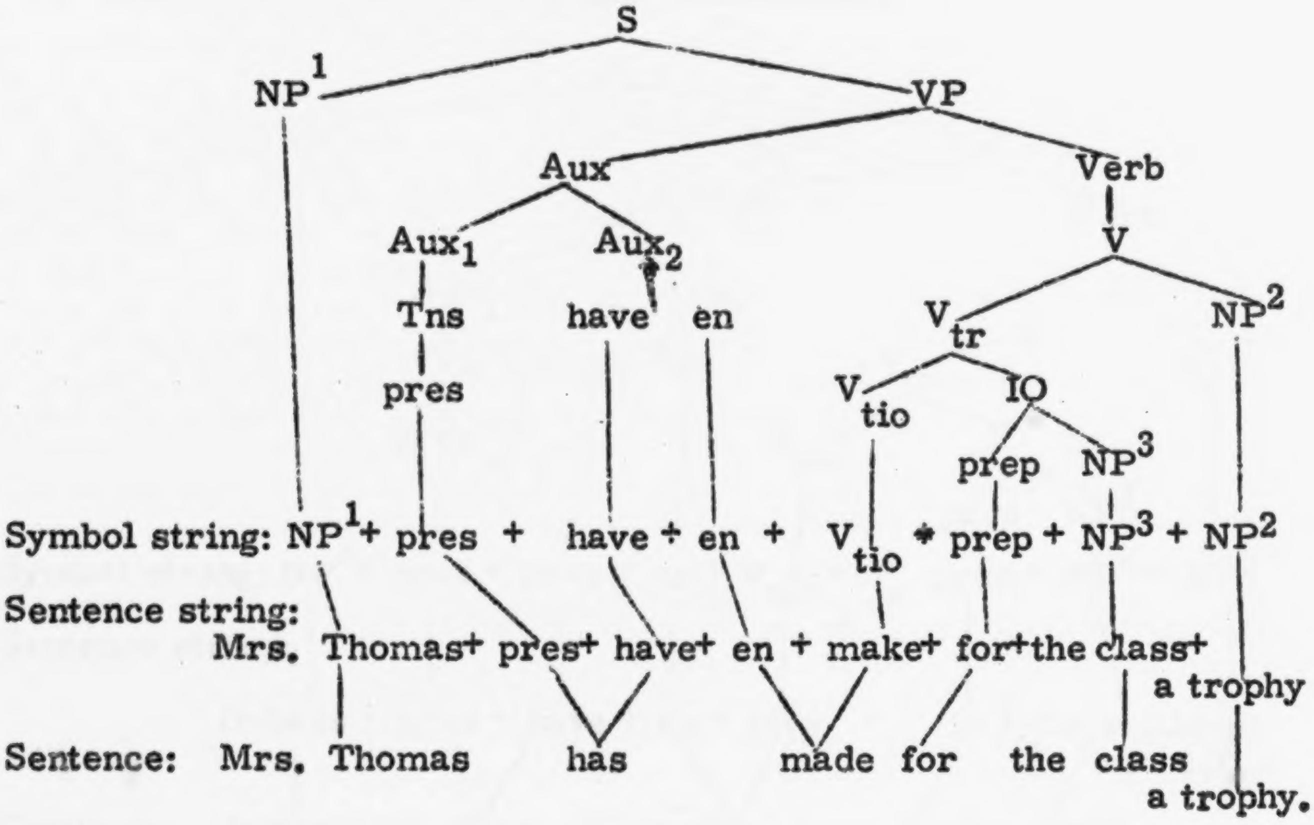
1. The ambassador bought the interpreter a dictionary.


S
NP1
VP
Aux
Verb
Aux1
V
Tns
Vtr
NP2
past
Vtio
IO
prep
NP3
Symbol string:
NP1 + past + Vtio + prep + NP3 + NP2
Sentence string: The ambassador + past + buy + for + the interpreter + a dictionary
Sentence: The ambassador bought for the interpreter a dictionary.

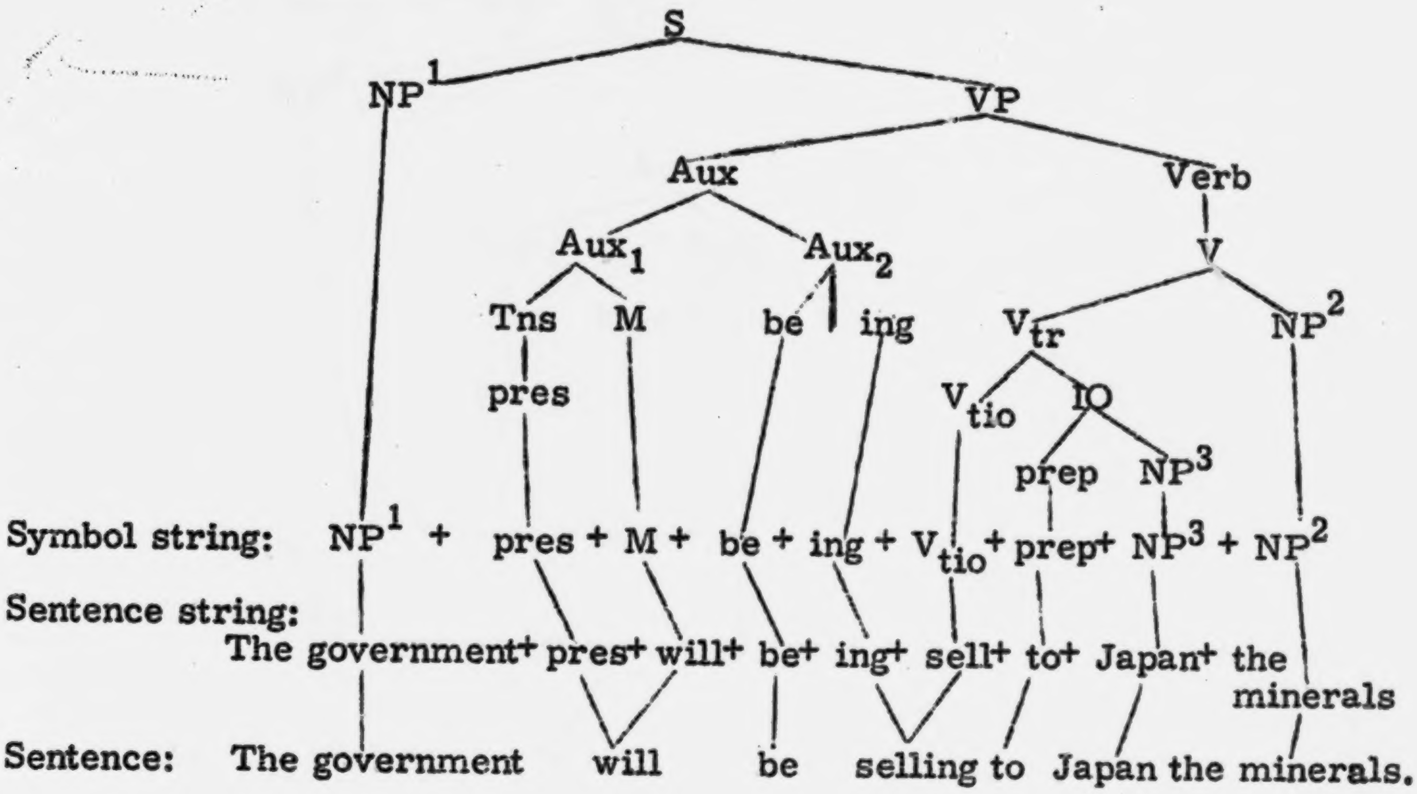
2. Mr. Goldwater offered the people a choice.


S
NP^1
VP
Aux
Verb
Aux$_1$
V
Tns
V$_{tr}$
NP^2
past
V$_{tio}$
IO
prep
NP^3
Symbol string: NP^1 + past + V$_{tio}$ + prep + NP^3 + NP^2
Sentence string: Mr. Goldwater + past + offer + to + the people + a choice
Sentence: Mr. Goldwater offered to the people a choice.

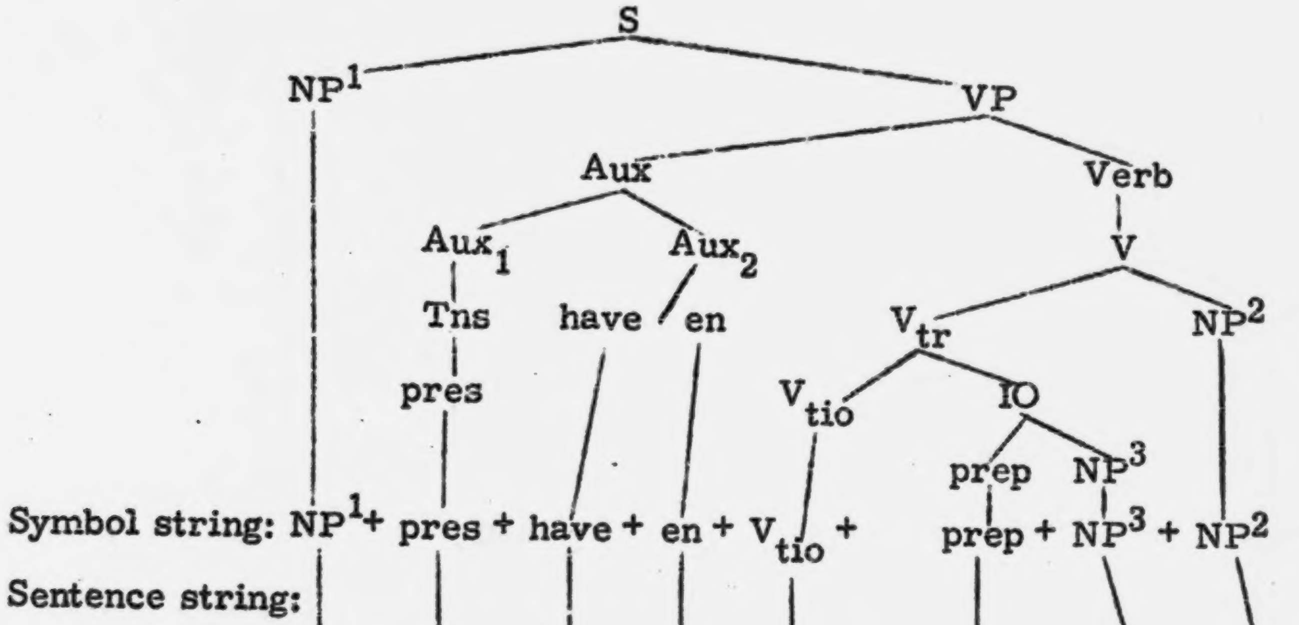
3. Mrs. Thomas has made the class a trophy.


S
NP^1
VP
Aux
Verb
Aux$_1$
Aux$_2$
V
Tns
have
en
V$_{tr}$
NP^2
pres
V$_{tio}$
IO
prep
NP^3
Symbol string: NP^1 + pres + have + en + V$_{tio}$ + prep + NP^3 + NP^2
Sentence string:
Mrs. Thomas + pres + have + en + make + for + the class + a trophy
Sentence: Mrs. Thomas has made for the class a trophy.

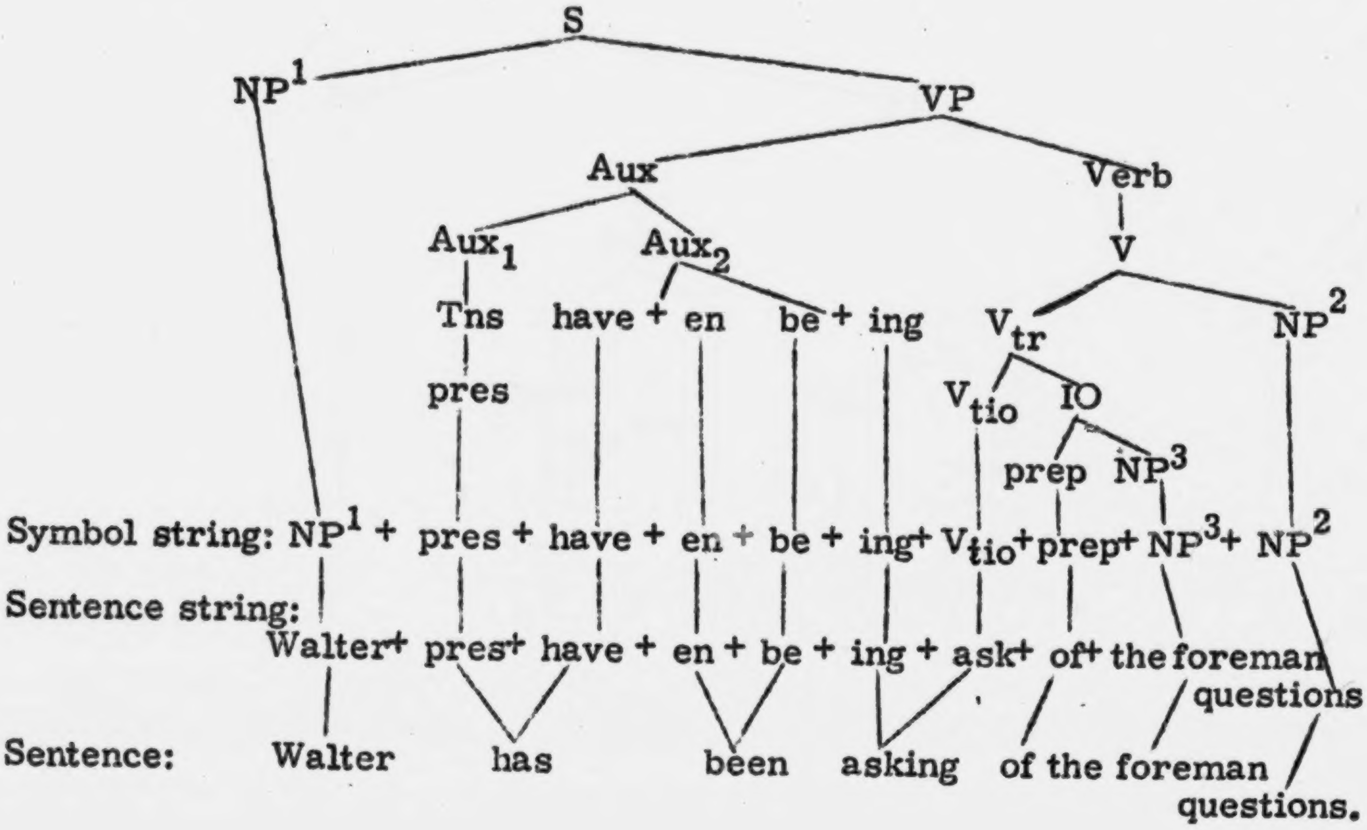
4. The government will be selling Japan the minerals.


S
NP¹
VP
Aux
Verb
Aux₁
Aux₂
V
Tns
M
be
ing
Vtr
NP²
pres
Vtio
IO
prep
NP³
Symbol string: NP¹ + pres + M + be + ing + Vtio + prep + NP³ + NP²
Sentence string:
The government+ pres+ will+ be+ ing+ sell+ to+ Japan+ the minerals
Sentence: The government will be selling to Japan the minerals.

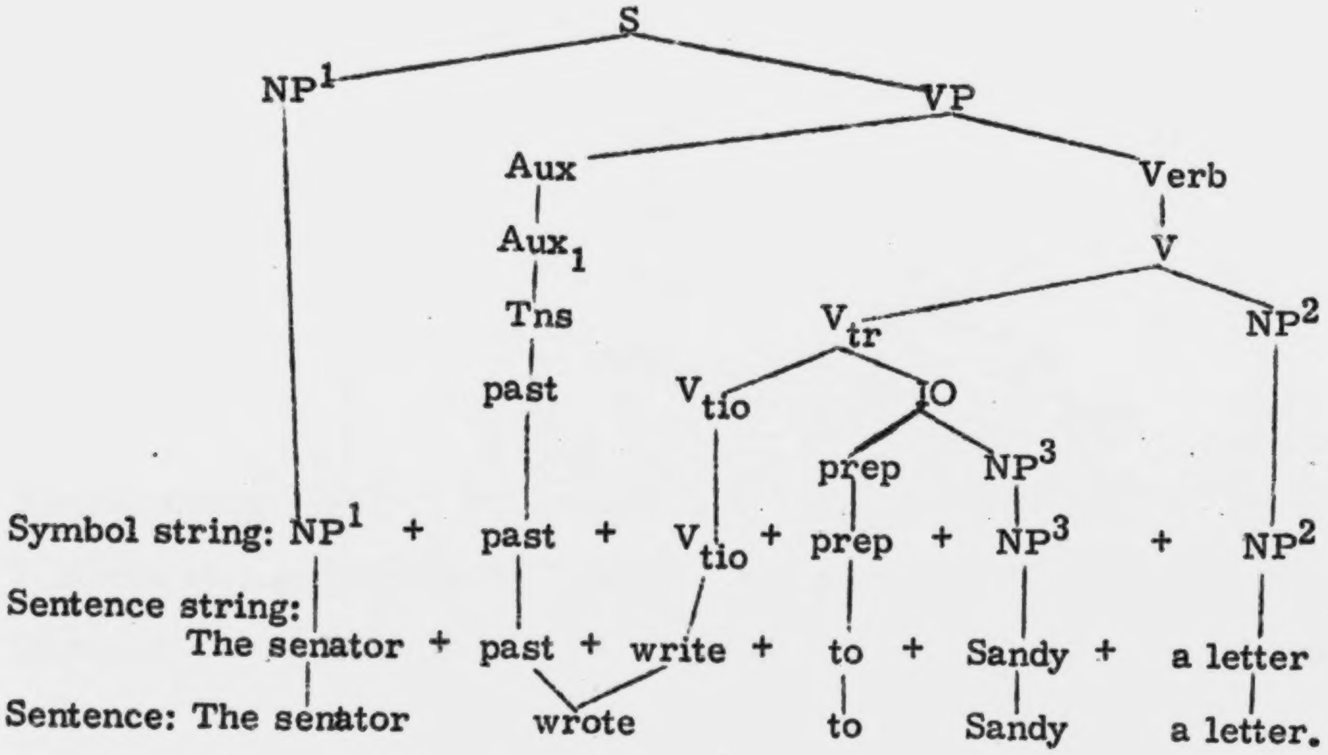
5. Indians have given the settlers instruction.


S
NP¹
VP
Aux
Verb
Aux₁
Aux₂
V
Tns
have
en
Vtr
NP²
pres
Vtio
IO
prep
NP³
Symbol string: NP¹ + pres + have + en + Vtio + prep + NP³ + NP²
Sentence string:
Indians + pres + have + en + give + to + the settlers + instruction
Sentence: Indians have given to the settlers instruction,

6. Walter has been asking the foreman questions.

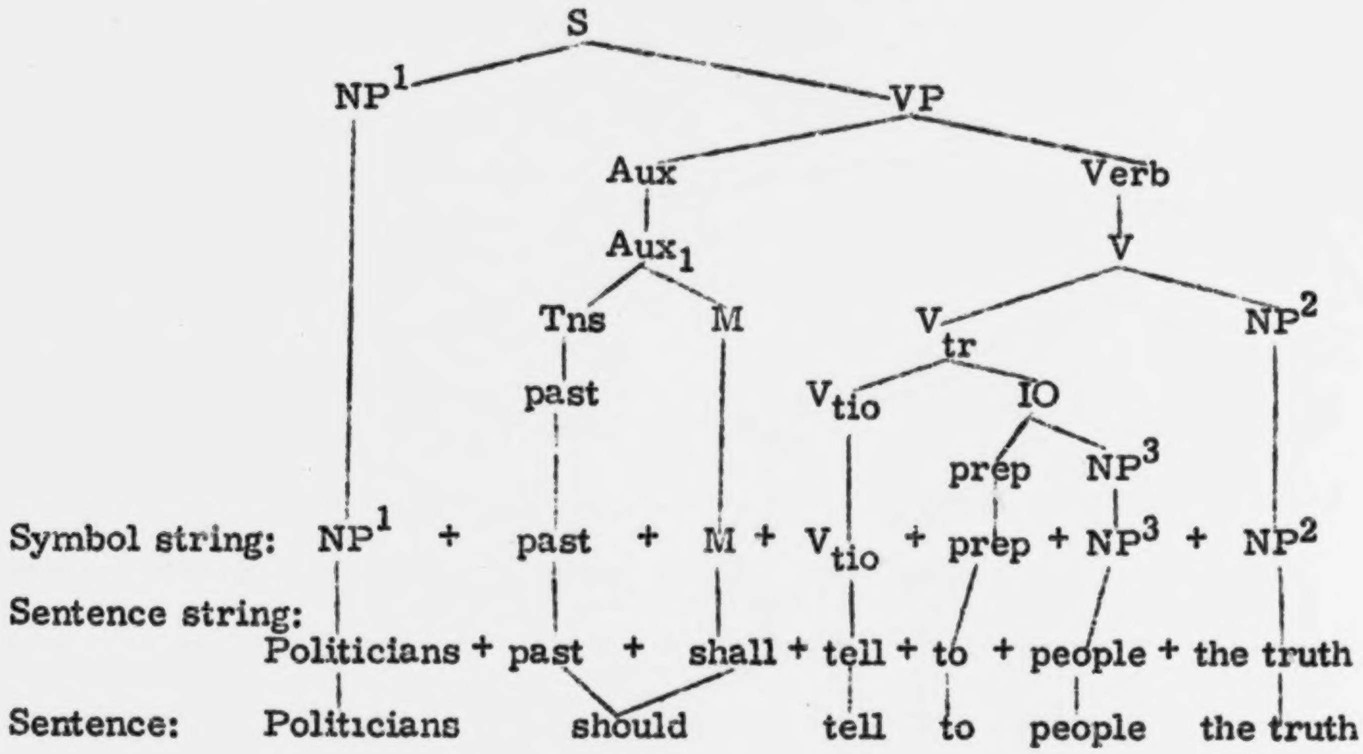

S
NP1
VP
Aux
Verb
Aux1
Aux2
V
Tns
have + en
be + ing
Vtr
NP2
pres
Vtio
IO
prep
NP3
Symbol string: NP1 + pres + have + en + be + ing + Vtio + prep + NP3 + NP2
Sentence string:
Walter + pres + have + en + be + ing + ask + of + the foreman questions
Sentence: Walter has been asking of the foreman questions.

7. The senator wrote Sandy a letter.

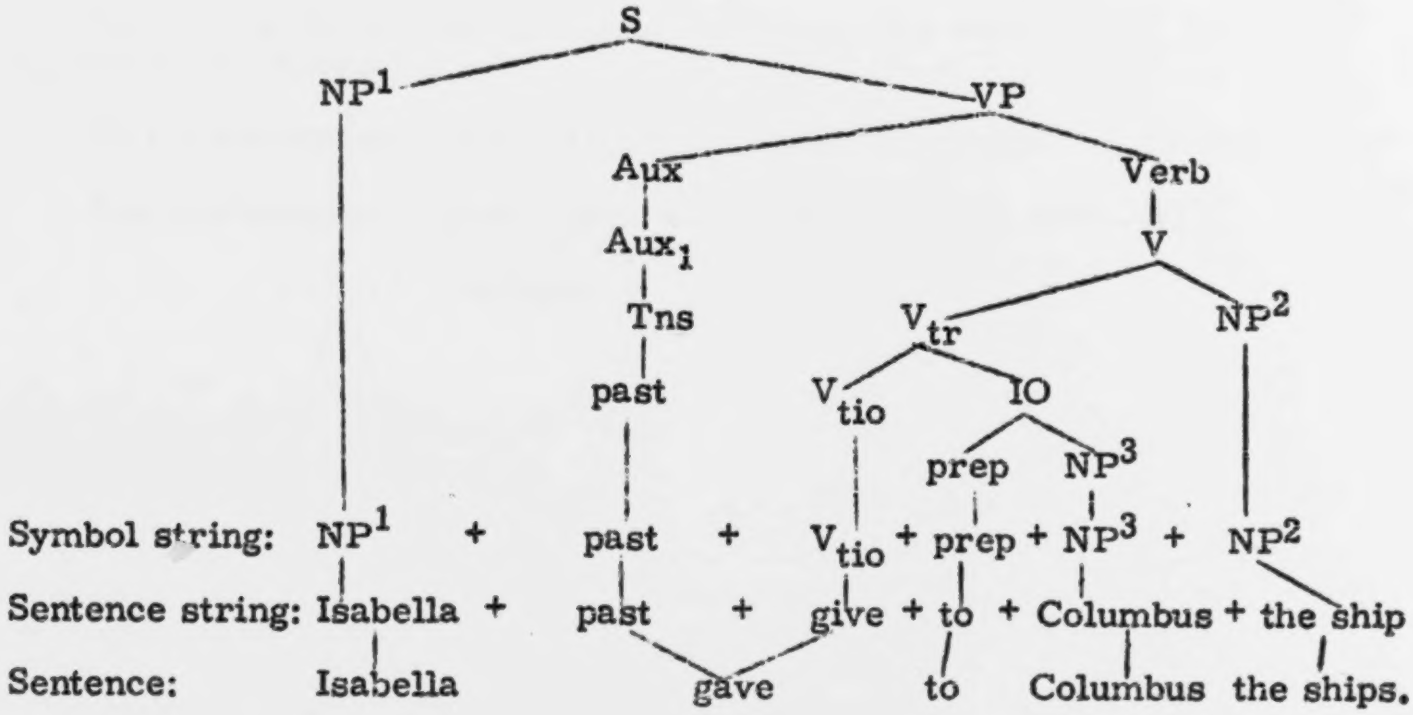

S
NP1
VP
Aux
Verb
Aux1
V
Tns
Vtr
NP2
past
Vtio
IO
prep
NP3
Symbol string: NP1 + past + Vtio + prep + NP3 + NP2
Sentence string:
The senator + past + write + to + Sandy + a letter
Sentence: The senator wrote to Sandy a letter.

(The verb write can also be followed by for.)

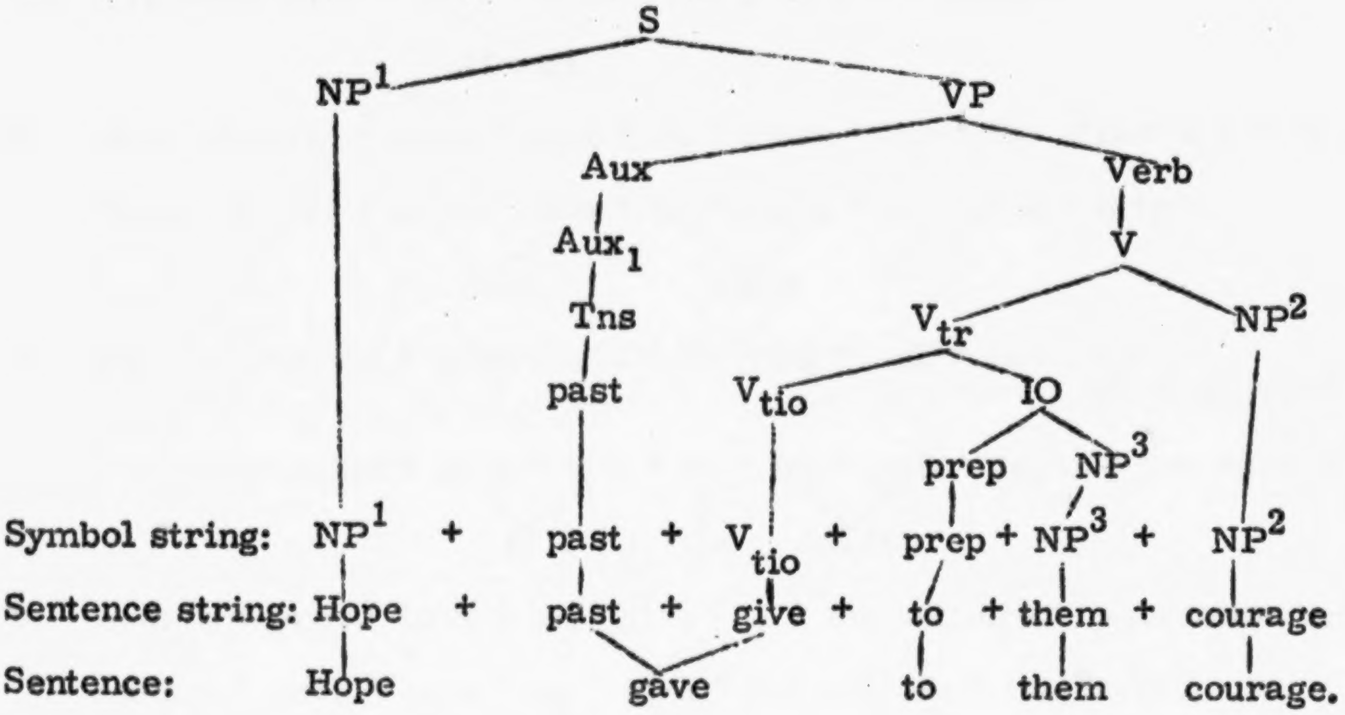
8. Politicians should tell people the truth.


S
NP¹
VP
Aux
Verb
Aux₁
V
Tns
M
Vtr
NP²
past
Vtio
IO
prep
NP³
Symbol string: NP¹ + past + M + Vtio + prep + NP³ + NP²
Sentence string:
Politicians + past + shall + tell + to + people + the truth
Sentence: Politicians should tell to people the truth

9. Isabella gave Columbus the ships.


S
NP¹
VP
Aux
Verb
Aux₁
V
Tns
Vtr
NP²
past
Vtio
IO
prep
NP³
Symbol string: NP¹ + past + Vtio + prep + NP³ + NP²
Sentence string: Isabella + past + give + to + Columbus + the ship
Sentence: Isabella gave to Columbus the ships.

10. Hope gave them courage.



Symbol string: NP^1 + past + V$_{tio}$ + prep + NP^3 + NP^2

Sentence string: Hope + past + give + to + them + courage

Sentence: Hope gave to them courage.

Exercise 3, p. 10, cont.

Part B: In the second string in each pair, the word to, of, or for has been deleted.

1. The ambassador + past + buy + for + the interpreter + a dictionary. ⇒

The ambassador + $\underbrace{\text{past + buy}}_{\text{bought}}$ + the interpreter + a dictionary.

2. Mr. Goldwater + past + offer + to + the people + a choice ⟹

Mr. Goldwater + $\underbrace{\text{past + offer}}_{\text{offered}}$ + the people + a choice

3. Mrs. Thomas + pres + have + en + make + for + the class + a trophy ⟹

Mrs. Thomas + $\underbrace{\text{pres + have}}_{\text{has}}$ + $\underbrace{\text{en + make}}_{\text{made}}$ + the class + a trophy

4. The government + pres + will + be + ing + sell + to + Japan + the minerals ⟹

The government + $\underbrace{\text{pres + will}}_{\text{will}}$ + $\underbrace{\text{be}}_{\text{be}}$ + $\underbrace{\text{ing + sell}}_{\text{selling}}$ + Japan + the minerals

5. Indians + pres + have + en + give + to + the settlers + instruction ⟹

Indians + $\underbrace{\text{pres + have}}_{\text{have}}$ + $\underbrace{\text{en + give}}_{\text{given}}$ + the settlers + instruction.

6. Walter + pres + have + en + be + ing + ask + of + the foreman + questions ⟹

Walter + $\underbrace{\text{pres + have}}_{\text{has}}$ + $\underbrace{\text{en + be}}_{\text{been}}$ + $\underbrace{\text{ing + ask}}_{\text{asking}}$ + the foreman + questions

7. The senator + past + write + to + Sandy + a letter ⟹

The senator + $\underbrace{\text{past + write}}_{\text{wrote}}$ + Sandy + a letter

8. Politicians + past + shall + tell + to + people + the truth ⟹

Politicians + $\underbrace{\text{past + shall}}_{\text{should}}$ + $\underbrace{\text{tell}}_{\text{tell}}$ + people + the truth

9. Isabella + past + give + to + Columbus + the ships ⟹

Isabella + $\underbrace{\text{past + give}}_{\text{gave}}$ + Columbus + the ships

10. Hope + past + give + to + them + courage ⟹

Hope + $\underbrace{\text{past + give}}_{\text{gave}}$ + them + courage

Part C: In the second string in each pair, the IO (the preposition + the NP^3) has been moved to the end of the string.

1. The ambassador + past + buy + for + the interpreter + a dictionary ⟹

The ambassador + past + buy + a dictionary + for + the interpreter

bought

2. Mr. Goldwater + past + offer + to + the people + a choice ⟹

Mr. Goldwater + past + offer + a choice + to + the people

offered

3. Mrs. Thomas + pres + have + en + make + for + the class + a trophy ⟹

Mrs. Thomas + pres + have + en + make + a trophy + for + the class

has made

4. The government + pres + will + be + ing + sell + to + Japan + the minerals ⟹

The government + pres + will + be + ing + sell + the minerals + to + Japan

will be selling

5. Indians + pres + have + en + give + to + the settlers + instruction ⟹

Indians + pres + have + en + give + instruction + to + the settlers

have given

6. Walter + pres + have + en + be + ing + ask + of + the foreman + questions ⟹

Walter + pres + have + en + be + ing + ask + questions + of + the foreman

has been asking

7. The senator + past + write + to + Sandy + a letter ⟹

The senator + past + write + a letter + to + Sandy

wrote

8. Politicians + past + shall + tell + to + people + the truth ⟹

Politicians + past + shall + tell + the truth + to + people

should tell

9. Isabella + past + give + to + Columbus + the ships $\Longrightarrow$

Isabella + past + give + the ships + to + Columbus

gave

10. Hope + past + give + to + them + courage $\Longrightarrow$

Hope + past + give + courage + to + them

gave

Exercise 4, page 10:

Answers will vary. The tests for V_{tio} are the following:

1. The verb must be followed by to, of, or for and two NP's. The words to, of, and for must be deleted, or the IO must exchange positions with NP^2.
2. The sentences containing V_{tio} verbs can be made passive in two different ways.

Exercise 5, page 10:

1. Father brought some roses to Mother. (Sentence)
$NP + Aux + V_{tio} + prep + NP^3 + NP^2$ (Underlying string)
Father brought to Mother some roses.

2. The swindler made Jim a proposition.
$NP + Aux + V_{tio} + prep + NP^3 + NP^2$
The swindler made to Jim a proposition.

3. The officer asked Jeff some questions.
$NP + Aux + V_{tio} + prep + NP^3 + NP^2$
The officer asked of Jeff some questions.

4. Frank built a playhouse for the children.
$NP + Aux + V_{tio} + prep + NP^3 + NP^2$
Frank built for the children a playhouse.

5. The cook baked the man a cake.
$NP + Aux + V_{tio} + prep + NP^3 + NP^2$
The cook baked for the man a cake.

Exercise 1, page 12:

This exercise reviews the indirect object verb. Some transitive verbs can take two object NP's: one--the direct object--is a rewrite of V (10. $V \rightarrow \begin{Bmatrix} V_{tr} + NP^2 \\ V_{in} \end{Bmatrix}$); the other is a part of the indirect object (10.3 IO $\longrightarrow$ prep + NP^3). IO, of course, occurs with that subclass of transitive verbs which take indirect objects. The choice of a V_{tio} verb requires the choice of a compatible preposition in the IO. In a fuller presentation, the preposition would be specified; in this unit the pupil is simply asked to choose a preposition that is grammatical with the particular V_{tio} verb (e. g., give to, bake for, ask of). The preposition is later deleted unless the IO is moved to the other side of NP^2.

A sentence with a V_{tio} verb in it can be made passive in two different ways. For example:

The coach $\overset{V_{tio}}{\text{gave}}$ (to) the swimmer a demonstration
a. The swimmer was given a demonstration by the coach.
b. A demonstration was given the swimmer by the coach.

1. V_{tio} -- give
2. Not a V_{tio} verb, since it cannot be made passive in two different way:
3. V_{tio} -- give
4. V_{tio} -- write (Either "wrote to" or "wrote for" would be possible here.)
5. V_{tio} -- give
6. V_{tio} -- build
7. V_{tio} -- ask
8. V_{tio} -- design
9. V_{tio} -- give
10. V_{tio} -- send

Exercise 2, Page 13:

1. The boy $\overset{V_{tio}}{\underline{\text{gave}}}$ the apple $\overset{IO}{\underline{\text{to the teacher}}}$.
2. The hawk $\overset{V_{id}}{\underline{\text{dived}}}$ $\overset{Dir}{\underline{\text{at the chicken}}}$.
3. The teacher $\overset{V_{tdir}}{\underline{\text{sent}}}$ the girl $\overset{Dir}{\underline{\text{home}}}$.
4. Water $\overset{V_{id}}{\underline{\text{has been trickling}}}$ $\overset{Dir}{\underline{\text{into the basement}}}$.
5. We $\overset{V_{tdir}}{\underline{\text{drove}}}$ the car $\overset{Dir}{\underline{\text{into the garage}}}$.
6. The conductor $\overset{V_{id}}{\underline{\text{ran}}}$ $\overset{Dir}{\underline{\text{toward the station}}}$.
7. The man $\overset{V_{tdir}}{\underline{\text{directed}}}$ the boys $\overset{Dir}{\underline{\text{to the exit}}}$.

8. Jim $\underline{\overset{V_{tdir}}{\text{led}}}$ the donkey $\underline{\overset{Dir}{\text{toward the gate.}}}$
9. She $\underline{\overset{V_{tdir}}{\text{drove}}}$ the car $\underline{\overset{Dir}{\text{away}}}$.
10. Jack $\underline{\overset{V_{tdir}}{\text{guided}}}$ the ball $\underline{\overset{Dir}{\text{into the basket.}}}$

Exercise 3, pp. 15-16 :

We have left out the sentence string, thinking that 9th graders can make the change from symbol to final sentence fairly automatically. That is, in the first sentence, they can probably see that past + $V_{tdir} \Longrightarrow$ sent. If they have trouble you may want to have them write out the intervening step.

past + V_{tdir}
past + send
sent

1. NP^1 + past + V_{tdir} + Dir + NP^2 $\xRightarrow{T_{Dir}}$
The teacher sent home the girl

NP^1 + past + Vt_{dir} + NP^2 + Dir
The teacher sent the girl home.

2. NP^1 + past + V_{tdir} + Dir + NP^2 $\xRightarrow{T_{Dir}}$
The boy drove into the garage the car

NP^1 + past + V_{tdir} + NP^2 + Dir
The boy drove the car into the garage.

3. NP^1 + past + V_{tdir} + Dir + NP^2 $\xRightarrow{T_{Dir}}$
The girl sent here her sister

NP^1 + past + V_{tdir} + NP^2 + Dir
The girl sent her sister here.

4. NP^1 + past + V_{tdir} + Dir + NP^2 $\xRightarrow{T_{Dir}}$
The dog guided into the fold the sheep

NP^1 + past + V_{tdir} + NP^2 + Dir
The dog guided the sheep into the fold

5. $NP^1 + past + V_{tdir} + Dir + NP^2 \Longrightarrow$
He drove into the field the horses

$NP^1 + past + V_{tdir} + NP^2 + Dir$
He drove the horses into the field

6. $NP^1 + past + V_{tdir} + Dir + NP^2 \Longrightarrow$
He guided toward the exit the boys

$NP^1 + past + V_{tdir} + NP^2 + Dir$
He guided the boys toward the exit

7. $NP^1 + past + V_{tdir} + Dir + NP^2 \Longrightarrow$
The farmer sent to town the grain

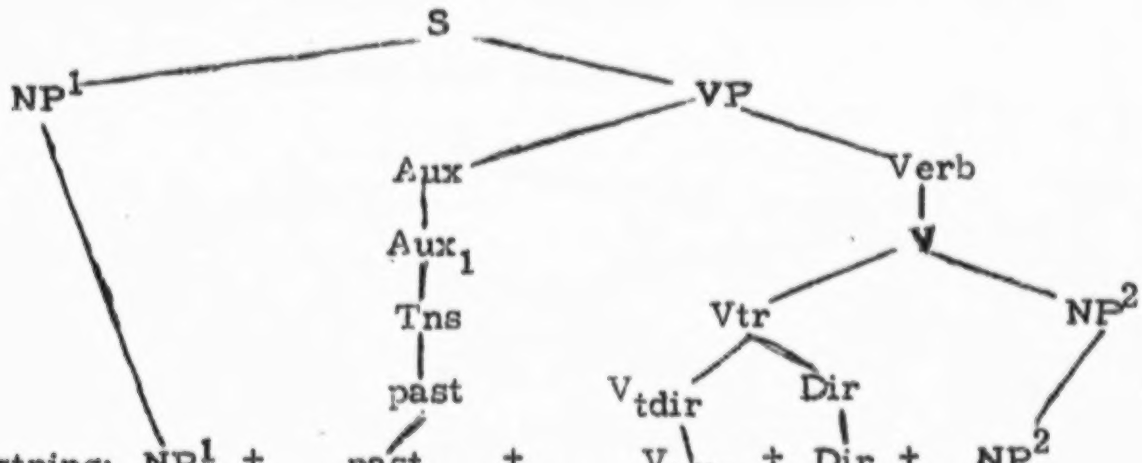
$NP^1 + past + V_{tdir} + NP^2 + Dir$
The farmer sent the grain to town

8. $NP^1 + past + V_{tdir} + Dir + NP^2 \Longrightarrow$
The farmer drove toward the market his cattle

$NP^1 + past + V_{tdir} + NP^2 + Dir$
The farmer drove his cattle toward the market.

Part B

1. John sent his sister to the store.



Symbol string: $NP^1 + past + V_{tdir} + Dir + NP^2$
Sentence string: John + past + send + to the store + his sister. $\Longrightarrow$

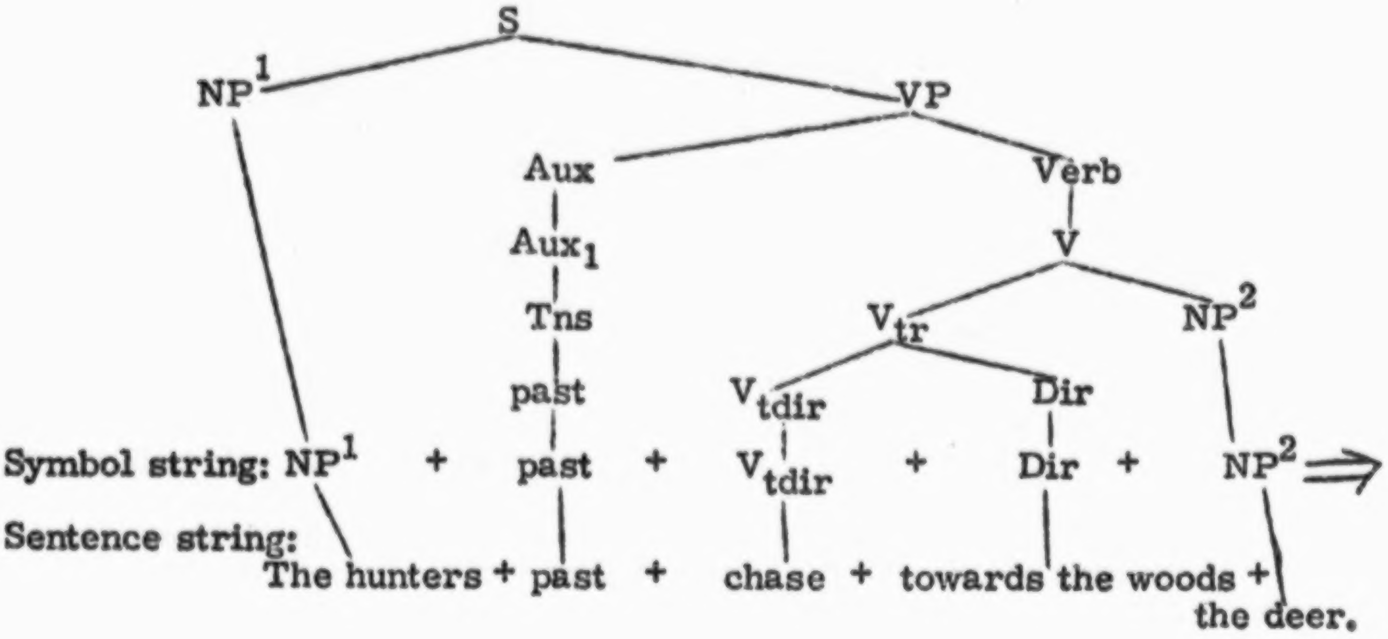
transformed string:

$NP + past + V_{tdir} + NP^2 + Dir$

John + past + send + his sister + to the store

John sent his sister to the store.

2. The hunters chased the deer toward the woods.



Symbol string: $NP^1 + past + V_{tdir} + Dir + NP^2 \Rightarrow$

Sentence string: The hunters + past + chase + towards the woods + the deer.

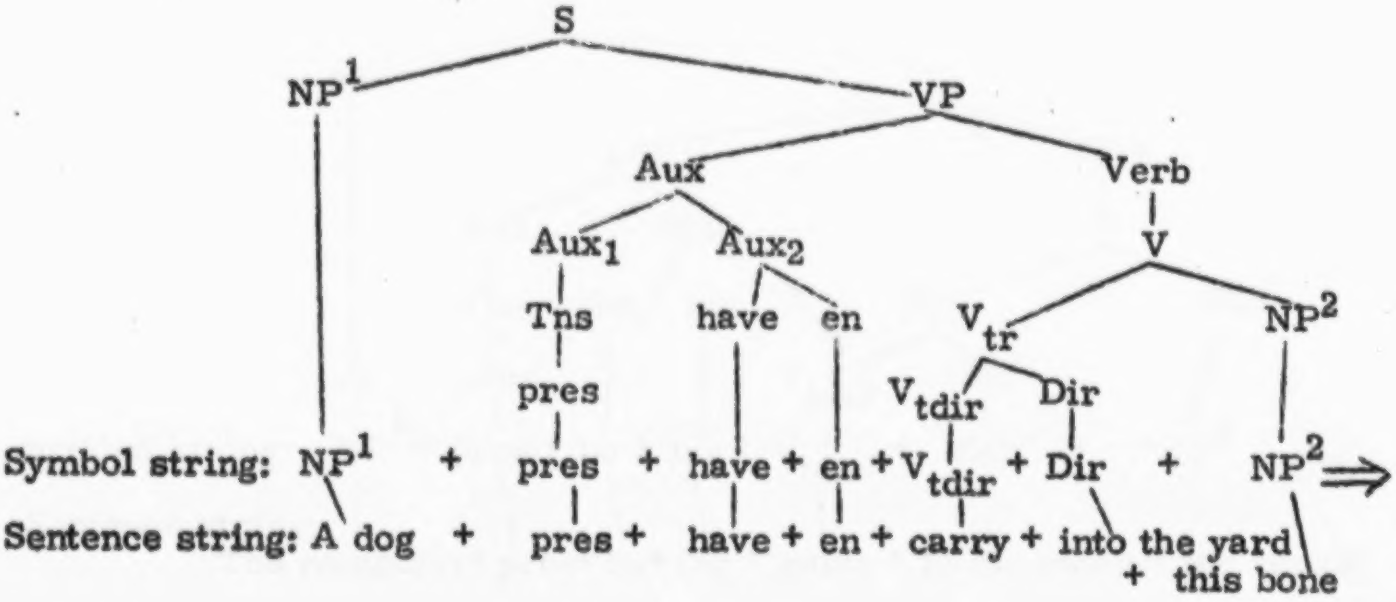
transformed string:

$NP^1 + past + V_{tdir} + NP^2 + Dir$

The hunters + past + chase + the deer + toward the woods

The hunters chased the deer toward the woods.

3. A dog has carried this bone into the yard.

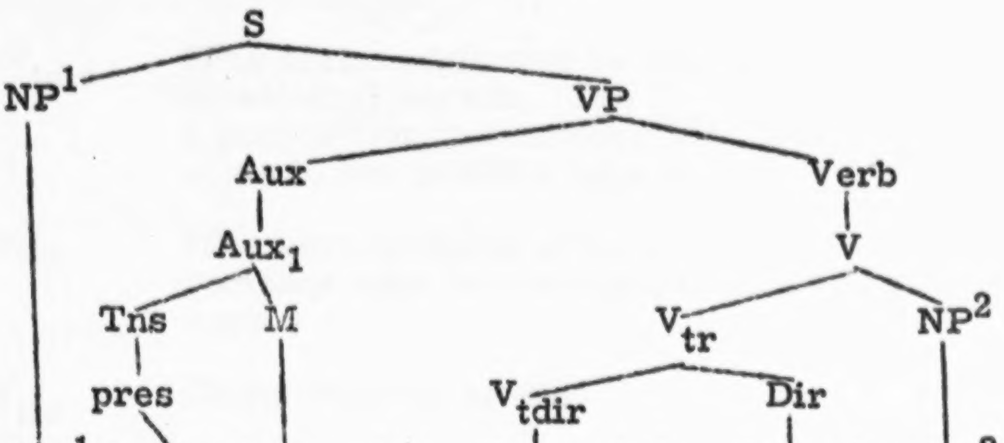


Symbol string: $NP^1 + pres + have + en + V_{tdir} + Dir + NP^2 \Rightarrow$

Sentence string: A dog + pres + have + en + carry + into the yard + this bone transformed string:

NP^1 + pres + have + en + V_{tdir} + NP^2 + Dir
A dog + pres + have + en + carry + this bone + into the yard
A dog has carried this bone into the yard.

4. A truck will take the papers to the warehouse.

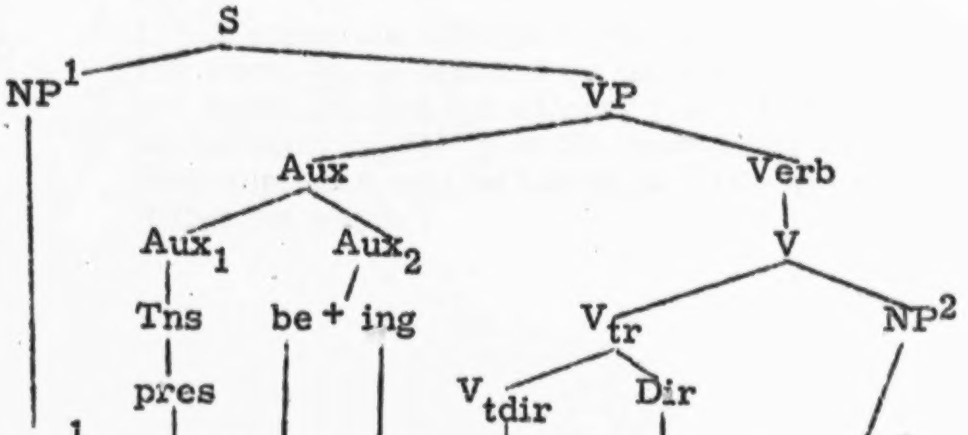


Symbol string: NP^1 + pres + M + V_{tdir} + + Dir + NP^2 $\Rightarrow$
Sentence string:
A truck + pres + will + take + to the warehouse + the papers.

transformed string:

NP^1 + pres + M + V_{tdir} + NP^2 + Dir
A truck + pres + will + take + the papers + to the warehouse.
A truck will take the papers to the warehouse.

5. The computer is guiding the rocket to the moon.



Symbol string: NP^1 + pres + be + ing + V_{tdir} + Dir + NP^2 $\Rightarrow$
Sentence string:
The computer + pres + be + ing + guide + to the moon + the rocket

Transformed string:

NP^1 + pres + be + ing + V_{tdir} + NP^2 + Dir
The computer + pres + be + ing + guide + the rocket + to the moon
The computer is guiding the rocket to the moon.

Exercise 1, page 17:
Part A

1. drive--V_{tdir}	(The verb is followed by both an NP^2 and a directional adverb. The Dir is made up of a preposition and another $\overline{NP}$. The Dir converts to the question where to?)
2. send--V_{tio}	(The verb is followed by two NP's and the sentence may be made passive in two different ways.)
3. bake--V_{tio}	(Same reasons as #2)
4. receive--V_{tr}	(This is a simple transitive verb followed by one NP.)
5. drive--V_{tdir}	(Same reasons as #1)
6. build--V_{tr}	(This is a transitive verb followed by an adverb of location [Loc]. This would be a good place to once again point up the difference between locative and directional adverbials.)
7. ask--V_{tio}	(Same reasons as #2)
8. send--V_{tdir}	(Same reasons as #1)
9. type--V_{tr}	(Same reasons as #4)
10. give--V_{tio}	(This sentence differs from #2, 3, and 7 in that the word to, generated as part of the verb, has not been deleted but simply moved [with its accompanying NP^3] to the end of the sentence. The sentence can be made passive in two different ways.)

Part B

1. $NP^1 + past + V_{tdir} + NP^2 + Dir$

He drove the car into the garage.

This is a string transformed from

$NP^1 + past + V_{tdir} + Dir + NP^2$

He drove into the garage the car.

2. $NP^1 + past + V_{tio} + NP^3 + NP^2$

John sent Sally a letter.

This is a string transformed from

$NP^1 + past + V_{tio} + prep + NP^3 + NP^2$

John sent to Sally a letter.

3. $NP^1 + past + V_{tio} + NP^3 + NP^2$

John baked Jill a cake.

transformed from:

$NP^1 + past + V_{tio} + prep + NP^3 + NP^2$

John baked for Jill a cake.

4. $NP^1 + past + V_{tr} + NP^2$

Gerry received the award.

5. $NP^1 + past + V_{tdir} + NP^2 + Dir$

The man drove his car home.

This is a string transformed from

$NP^1 + past + V_{tdir} + Dir + NP^2$

The man drove home his car.

6. $NP^1 + pres + have + en + V_{tr} + NP^2 + Loc$

The oriole has built a nest in the cherry tree.

7. $NP^1 + past + V_{tio} + NP^3 + NP^2$

The boy asked the teacher a question.

transformed from:

$NP^1 + past + V_{tio} + prep + NP^3 + NP^2$

The boy asked of the teacher a question.

8. $NP^1 + past + V_{tdir} + NP^2 + Dir$

We sent a rocket toward the moon.

transformed from:

$NP^1 + past + V_{tdir} + Dir + NP^2$

We sent toward the moon a rocket.

9. $NP^1 + pres + be + ing + V_{tr} + NP^2$

He is typing his exam.

10. $NP^1 + past + V_{tio} + NP^2 + to + NP^3$

She gave some cheese to the mouse.

This is a string transformed from

$NP^1 + past + V_{tio} + prep + NP^3 + NP^2$

She gave to the mouse some cheese.

Sentences 2, 3, and 7 contain indirect objects. They differ in the preposition which occurs with the indirect object. (. . . baked *for* Jill. . .; . . . sent *to* Sally. . .; . . . asked *of* the teacher. . .). Sentences 1, 5, and 8 contain directional adverbs. *Inthe cherry tree* is, of course, an adverb of location.

Exercise 2, page 18:

1. $NP^1 + past + V_{tdir} + NP^2 + Dir$

Mick rowed the boat to shore.

2. NP^1 + past + V_{tdir} + NP^2 + Dir
Father plunged the knife into the roast.

3. NP^1 + past + V_{tdir} + NP^2 + Dir
The librarian put the books on the shelf.

4. NP^1 + past + V_{tdir} + NP^2 + Dir
I stuck the key into the lock.

5. NP^1 + pres + have + en + V_{tdir} + NP^2 + Dir
Jerry has taken his work home.

6. NP^1 + past + Vt_{dir} + NP^2 + Dir
The pitcher threw the ball to the umpire.

7. NP^1 + past + be + ing + Vt_{dir} + NP^2 + Dir
A monkey was hurling coconuts to the ground.

#8. NP^1 + past + Vt_{dir} + NP^2 + ?
Joan threw the coffee out.

(The discerning student will probably feel that there is something different about out particularly after he has worked through Exercise 3. This "intuition" should lead into the discussion of the particle.)

Exercise 3, page 19:

1. NP^1 + past + Vt_{dir} + Dir + NP^2
Mick rowed to shore the boat.

2. NP^1 + past + Vt_{dir} + Dir + NP^2
Father plunged into the roast the knife.

3. NP^1 + past + Vt_{dir} + Dir + NP^2
The librarian put on the shelf the books

4. NP^1 + past + Vt_{dir} + Dir + NP^2
I stuck into the lock the key

#5. NP^1 + pres + have + en + Vt_{dir} + Dir + NP^2
Jerry has taken home his work

(For some people #5 is also grammatical before transformation: Jerry has taken home his work.)

6. $NP^1 + past + Vt_{dir} + Dir + NP^2$
   The pitcher threw to the umpire the ball

7. $NP^1 + past + be + ing + Vt_{dir} + Dir + NP^2$
   A monkey was hurling to the ground coconuts

8. $NP^1 + past + Vt_{dir} + Dir + NP^2$
   Joan threw out the coffee.

(Throw can also be a V_{tdir} verb as in "He threw the rock at the window.")

Exercise 4, page 21:

1. give -- V_{tio}
2. read -- V_{tio}
3. throw away -- $V_{tprt} + Prt$
4. put away -- $Vt_{prt} + Prt$
5. bring up -- $V_{tprt} + Prt$
6. take over -- $V_{tprt} + Prt$
7. take -- V_{tdir}
8. blow up -- $V_{tprt} + Prt$
9. lead -- V_{tdir}
10. turn on -- $V_{tprt} + Prt$

Exercise 5, page 22:

1. *Jill put away it.
   Jill put it away.

2. *Susy brought in them.
   Susy brought them in.

3. *Jane brought up it.
   Jane brought it up.

4. *The Communists will take over it.
   The Communists will take it over.

5. *The men blew up it.
   The men blew it up.

6. *The coach pointed out him.
   The coach pointed him out.

7. *The men pitched in it.
   The men pitched it in.

8. *He called over her.
   He called her over.

1. When the NP^2 following a V_{tprt} verb is a noun the transformation is optional.

2. When the NP^2 is a pronoun the transformation is obligatory.

Exercise 6, pages 22-23:

The transformation moving the particle to the end of the sentence is obligatory in sentences #4, 7, 9, and 10. It is optional in #1, 2, 3, 5, 6, and 8.

Exercise 7, page 23:

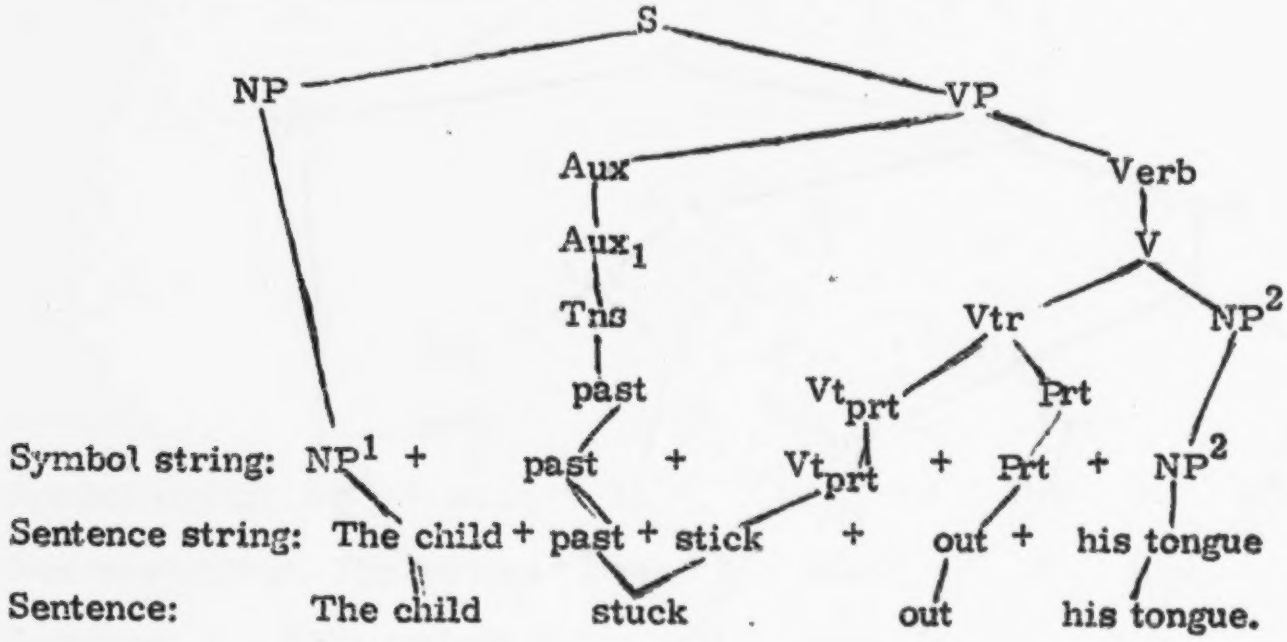
Part A

1. stick out--V_{tprt} + Prt
2. make--V_{tio}
3. take in--V_{tprt} + Prt
4. take--V_{tdir}
5. ask--V_{tio}
6. drag--V_{tdir}
7. build--V_{tio}
8. give--V_{tio}
9. push open--V_{tprt} + Prt
10. run--V_{tdir}

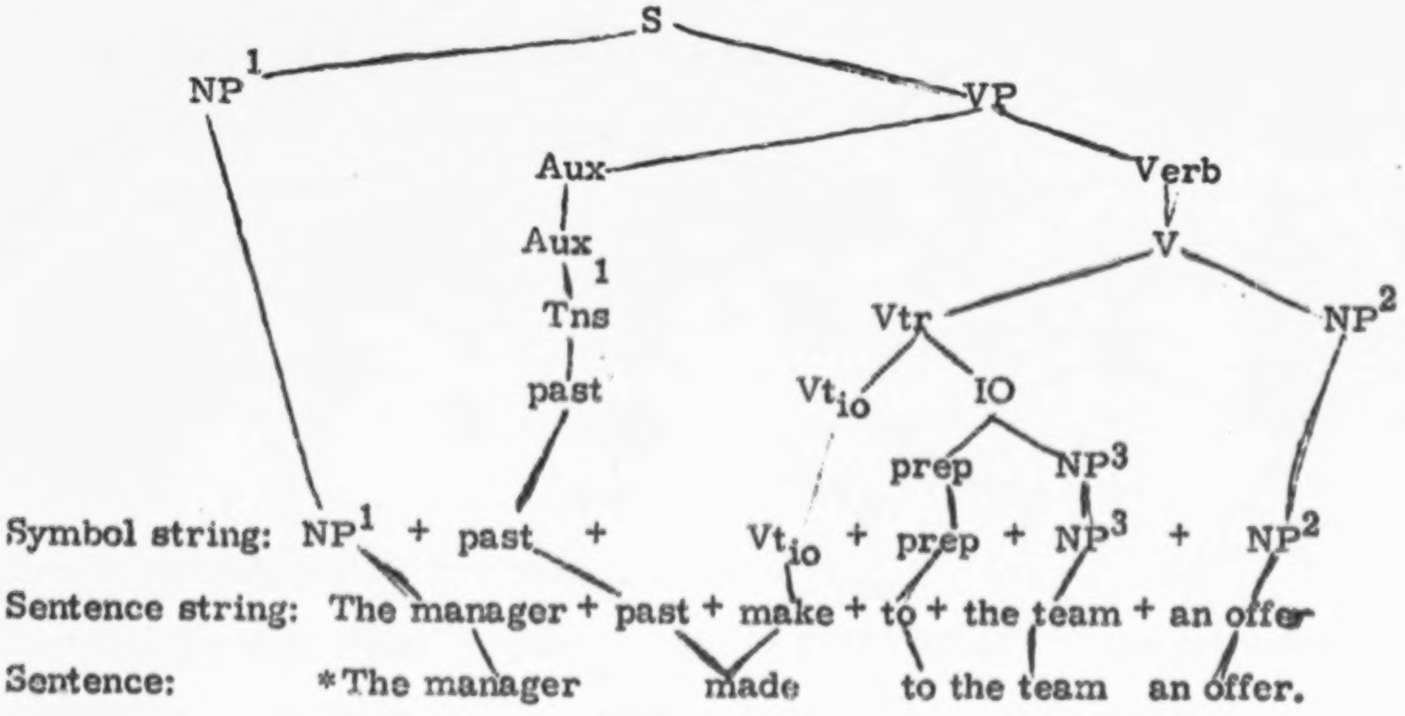
Part B

(With the exception of #1 and 9, all of the sentences in this exercise are the results of transformations. Thus, the sentences which are produced by the diagrams are ungrammatical. They require one more step.

1. The child stuck out his tongue.


S
NP
VP
Aux
Verb
Aux1
V
Tns
Vtr
NP2
past
Vtprt
Prt
Symbol string: NP1 + past + Vtprt + Prt + NP2
Sentence string: The child + past + stick + out + his tongue
Sentence: The child stuck out his tongue.

2. The manager made the team an offer.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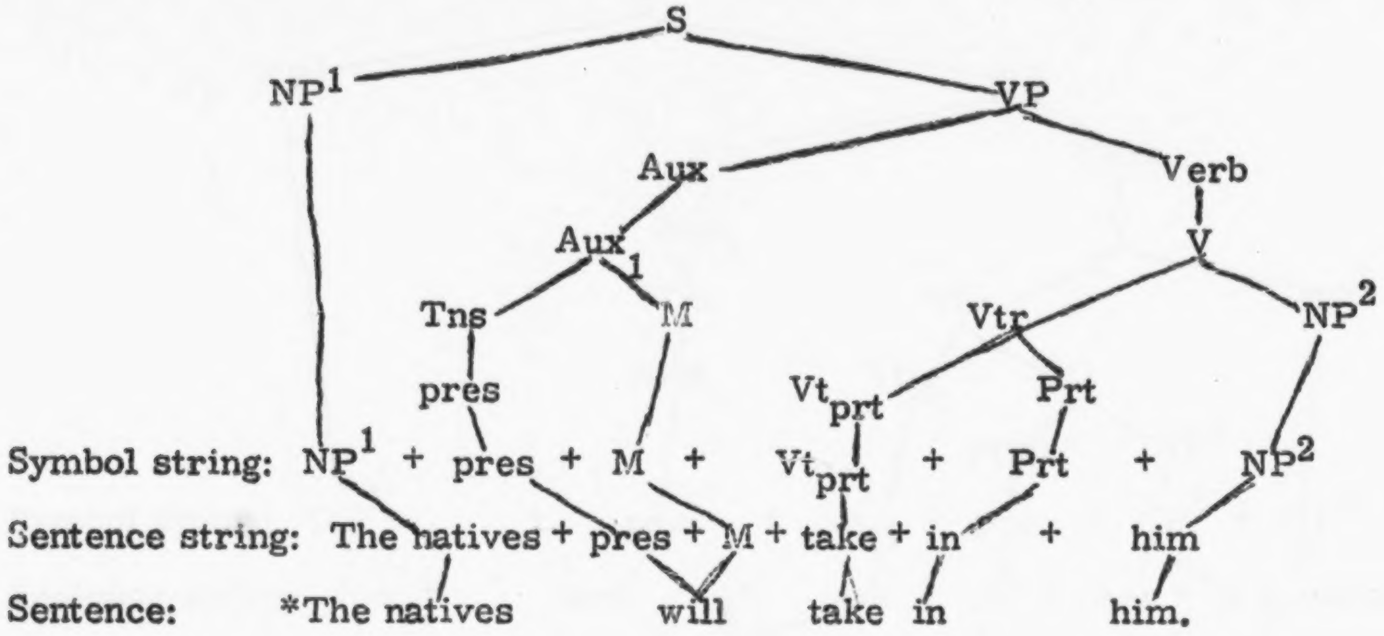
NP1
VP
Aux
Verb
Aux1
V
Tns
Vtr
NP2
past
Vtio
IO
prep
NP3
Symbol string: NP1 + past + Vtio + prep + NP3 + NP2
Sentence string: The manager + past + make + to + the team + an offer
Sentence: *The manager made to the team an offer.

3. The natives will take him in.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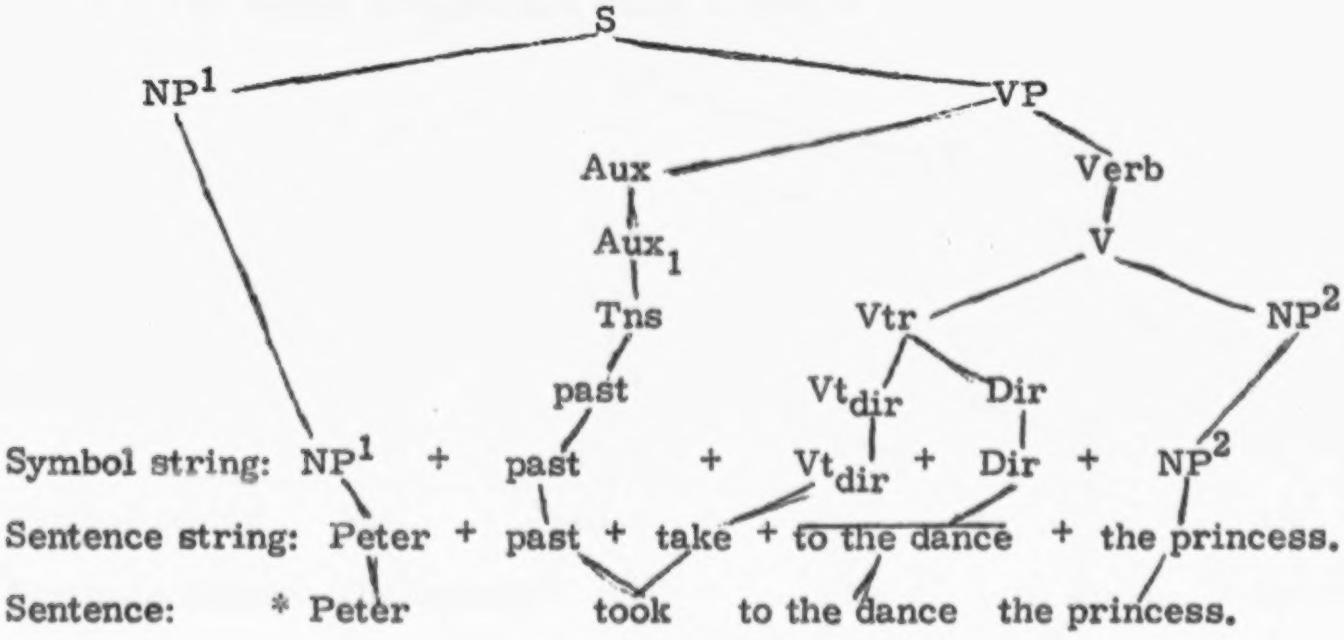
NP^1
VP
Aux
Verb
Aux$_1$
V
Tns
M
Vtr
NP^2
pres
Vt$_{prt}$
Prt
Symbol string: NP^1 + pres + M + Vt$_{prt}$ + Prt + NP^2
Sentence string: The natives + pres + M + take + in + him
Sentence: *The natives will take in him.

4. Peter took the princess to the dance.


S
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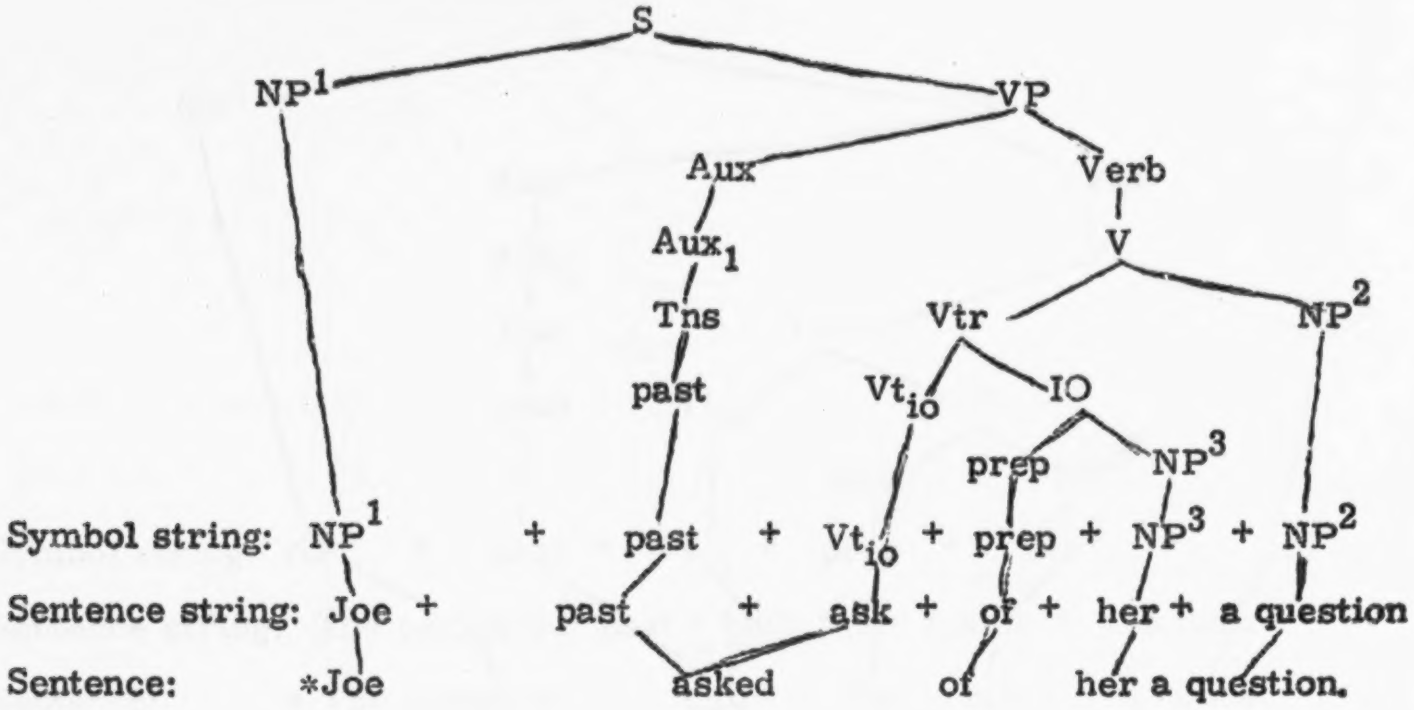
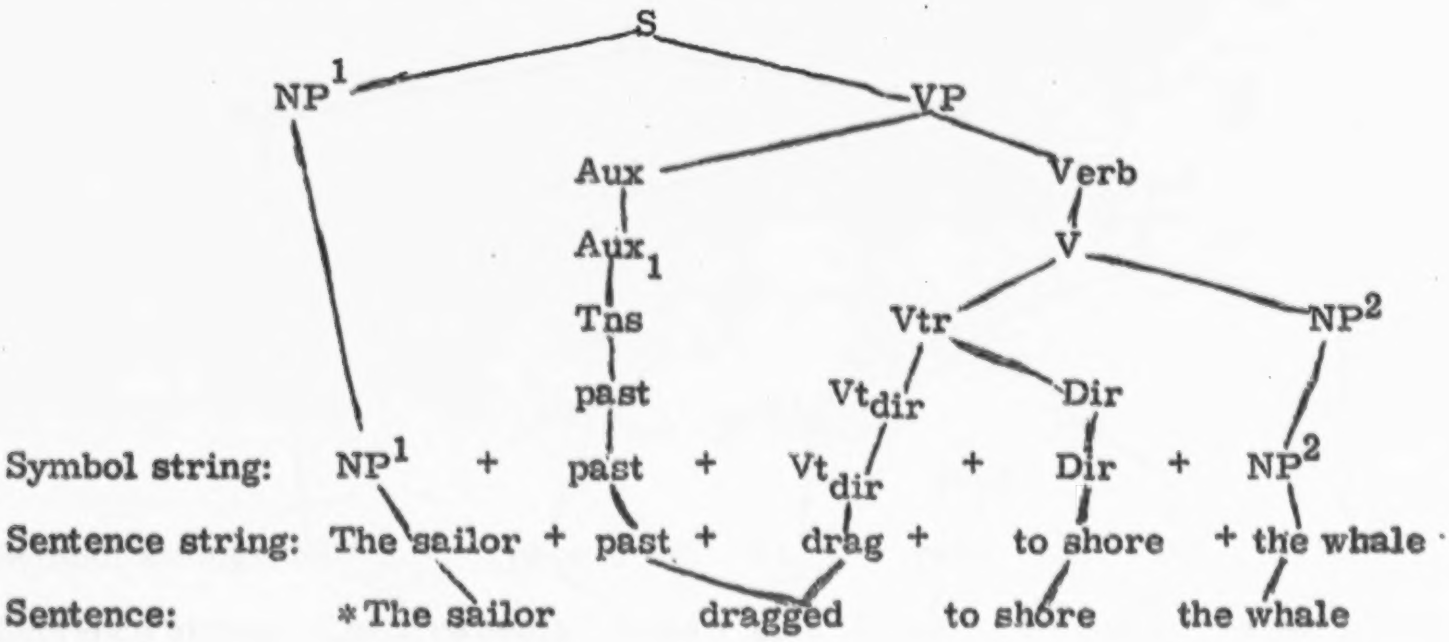
VP
Aux
Verb
Aux$_1$
V
Tns
Vtr
NP^2
past
Vt$_{dir}$
Dir
Symbol string: NP^1 + past + Vt$_{dir}$ + Dir + NP^2
Sentence string: Peter + past + take + ~~to the dance~~ + the princess.
Sentence: * Peter took to the dance the princess.

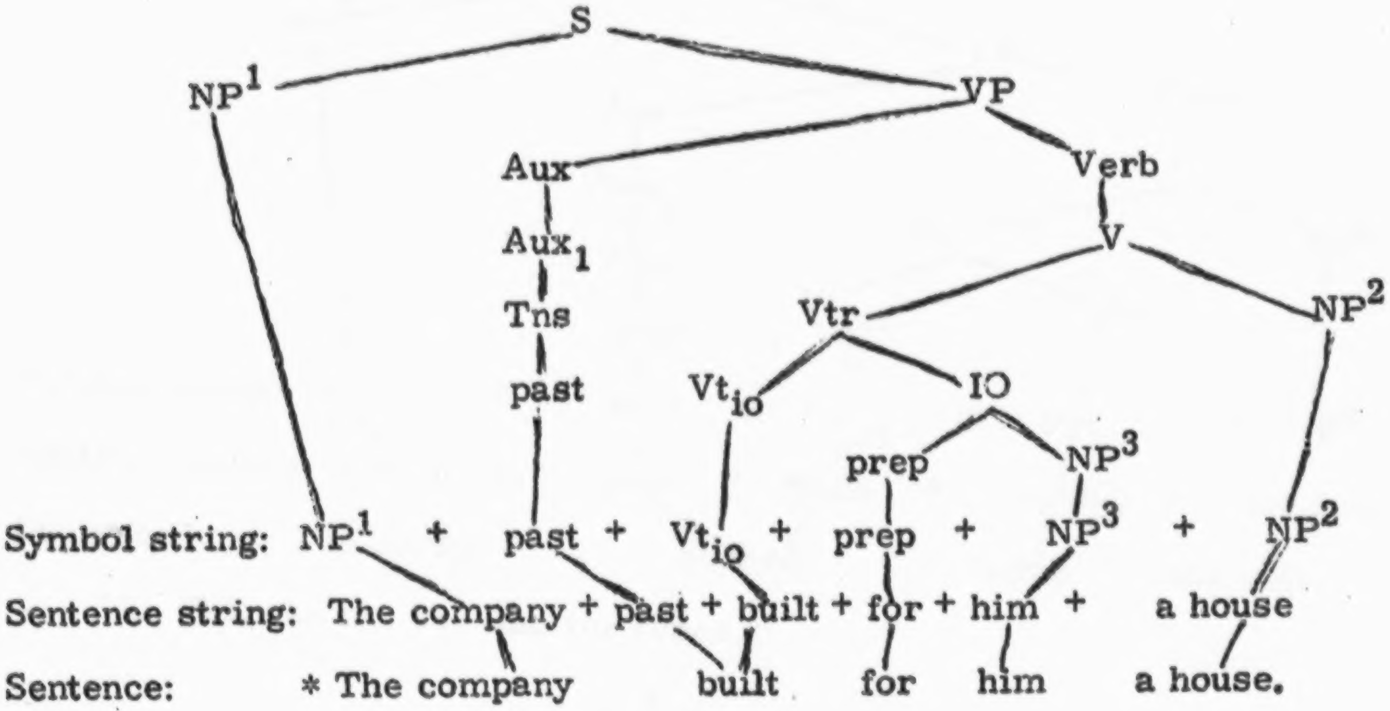
5. Joe asked her a question.


S
NP^1
VP
Aux
Verb
Aux$_1$
V
Tns
Vtr
NP^2
past
Vt$_{io}$
IO
prep
NP^3
Symbol string: NP^1 + past + Vt$_{io}$ + prep + NP^3 + NP^2
Sentence string: Joe + past + ask + of + her + a question
Sentence: *Joe asked of her a question.

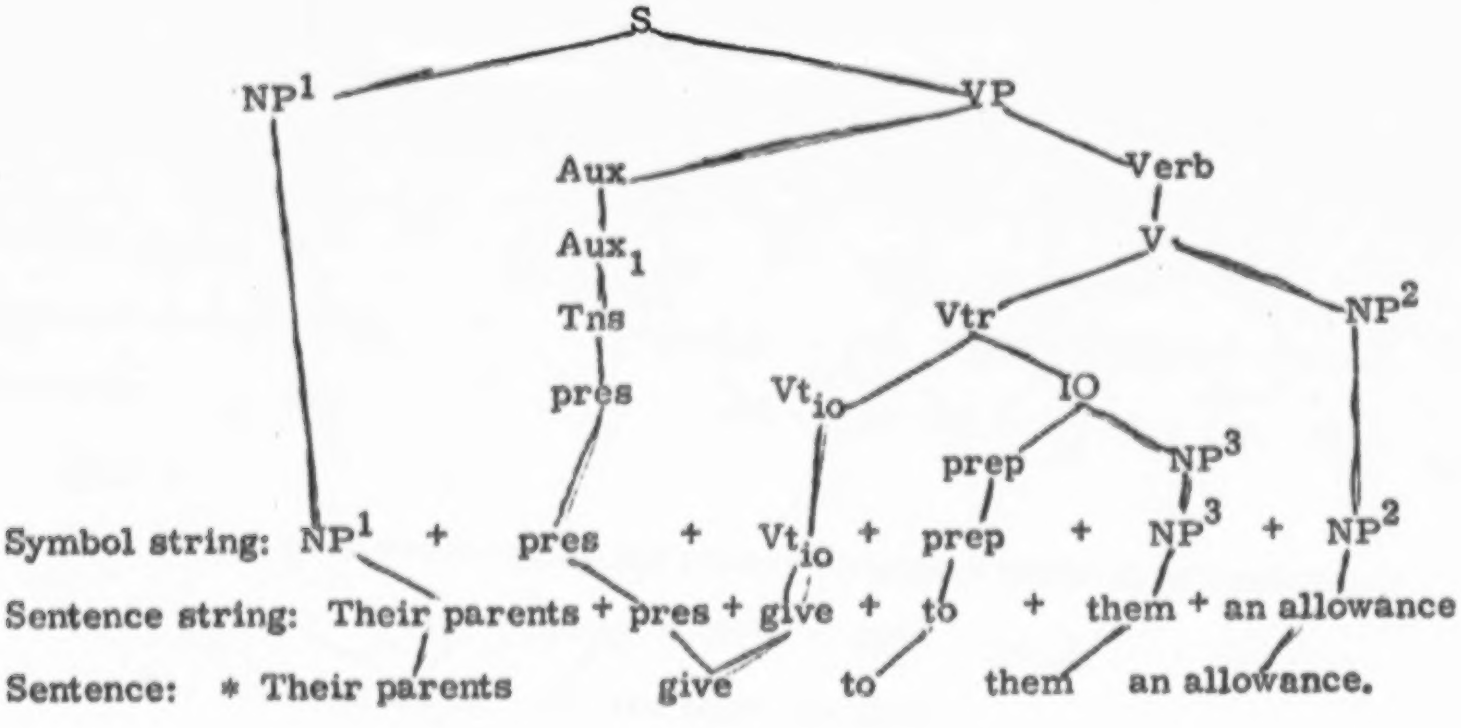
6. The sailor dragged the whale to shore.


S
NP^1
VP
Aux
Verb
Aux$_1$
V
Tns
Vtr
NP^2
past
Vt$_{dir}$
Dir
Symbol string: NP^1 + past + Vt$_{dir}$ + Dir + NP^2
Sentence string: The sailor + past + drag + to shore + the whale
Sentence: *The sailor dragged to shore the whale

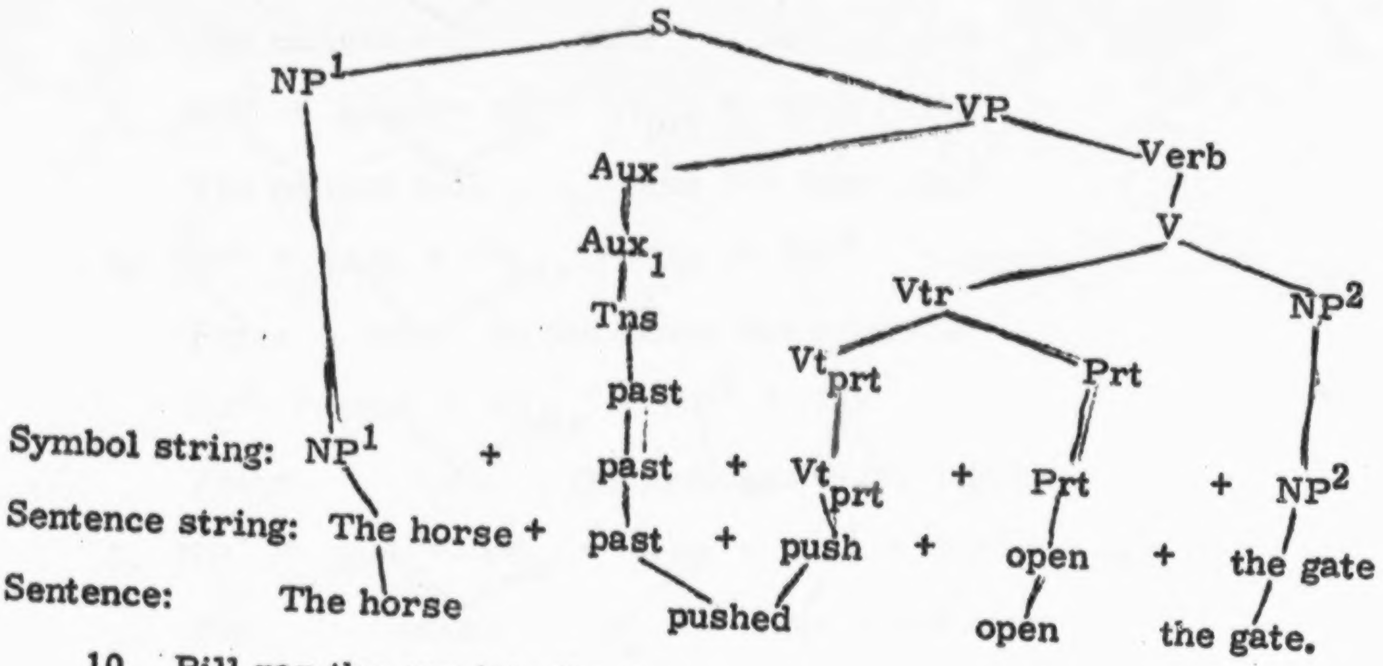
7. The company built him a house.


S
NP^1
VP
Aux
Verb
Aux$_1$
V
Tns
Vtr
NP^2
past
Vt$_{io}$
IO
prep
NP^3
Symbol string: NP^1 + past + Vt$_{io}$ + prep + NP^3 + NP^2
Sentence string: The company + past + built + for + him + a house
Sentence: * The company built for him a house.

8. Their parents give them an allowance.


S
NP^1
VP
Aux
Verb
Aux$_1$
V
Tns
Vtr
NP^2
pres
Vt$_{io}$
IO
prep
NP^3
Symbol string: NP^1 + pres + Vt$_{io}$ + prep + NP^3 + NP^2
Sentence string: Their parents + pres + give + to + them + an allowance
Sentence: * Their parents give to them an allowance.

9. The horse pushed open the gate.

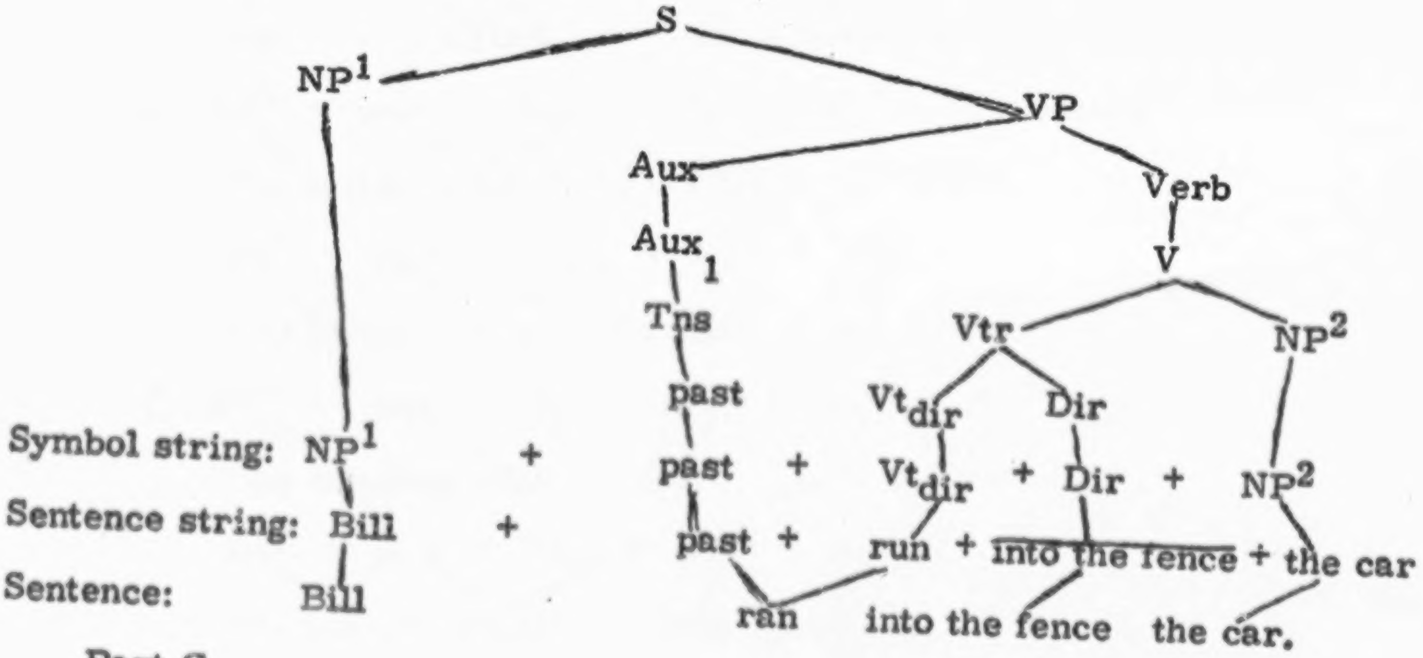


Symbol string: NP^1 + past + Vt$_{prt}$ + Prt + NP^2

Sentence string: The horse + past + push + open + the gate

Sentence: The horse pushed open the gate.

10. Bill ran the car into the fence.



Symbol string: NP^1 + past + Vt$_{dir}$ + Dir + NP^2

Sentence string: Bill + past + run + into the fence + the car

Sentence: Bill ran into the fence the car.

Part C

1. The sentence produced by the phrase structure rules is grammatical.

2. NP^1 + past + Vt$_{io}$ + prep + NP^3 + NP^2 $\Longrightarrow$

The manager made to the team an offer

NP^1 + past + Vt$_{io}$ + NP^3 + NP^2

The manager made the team an offer.

3. $NP^1 + pres + M + Vt_{prt} + Prt + NP^2 \Longrightarrow$
The natives will take in him

$NP^1 + pres + M + Vt_{prt} + NP^2 + Prt$
The natives will take him in.

4. $NP^1 + past + Vt_{dir} + Dir + NP^2 \Longrightarrow$
Peter took to the dance the princess

$NP^1 + past + Vt_{dir} + NP^2 + Dir$
Peter took the princess to the dance.

5. $NP^1 + past + Vt_{io} + prep + NP^3 + NP^2 \Longrightarrow$
Joe asked of her a question

$NP^1 + past + Vt_{io} + NP^3 + NP^2$
Joe asked her a question.

6. $NP^1 + past + Vt_{dir} + Dir + NP^2 \Longrightarrow$
The sailor dragged to the shore the whale

$NP^1 + past + Vt_{dir} + NP^2 + Dir$
The sailor dragged the whale to the shore.

7. $NP^1 + past + Vt_{io} + prep + NP^3 + NP^2 \Longrightarrow$
The company built for him a house

$NP^1 + past + Vt_{io} + NP^3 + NP^2$
The company built him a house.

8. $NP^1 + pres + Vt_{io} + prep + NP^3 + NP^2 \Longrightarrow$
Their parents give to them an allowance

$NP^1 + pres + Vt_{io} + NP^3 + NP^2$
Their parents give them an allowance.

9. The sentence produced by the phrase structure rules is grammatical.

10. $NP^1 + past + Vt_{dir} + Dir + NP^2 \Longrightarrow$

Bill ran into the fence the car

$NP^1 + past + Vt_{dir} + NP^2 + Dir$

Bill ran the car into the fence.

Exercise 1, page 25: (In the 4th line of the directions, have should be has.)

1. $Vt_{prt} + Prt$, John threw away the towel
   John threw the towel away.

2. $Vt_{dir} + Dir$, We drove into the garage the car
   We drove the car into the garage.

3. (look at is the $Vt_{prep} + Prep$ which this unit introduces. Students probably ~~will~~ recognize that there is something different about the verb and the element attached.)

4. $Vt_{io} + IO$, Many people give to the Red Cross contributions

   Many people give contributions to the Red Cross.

5. $Vt_{dir} + Dir$, We headed toward the island the boat
   We headed the boat toward the island.

6. (talk about is the new verb class $Vt_{prep} + Prep$.)

7. (paid for is also $Vt_{prep} + Prep$.)

8. $Vt_{prt} + Prt$, Mary made up the story.
   Mary made the story up.

9. $Vt_{dir} + Dir$, Laura took to the store her mother
   Laura took her mother to the store.

10. $Vt_{prt} + Prt$, They tried on coats.
    They tried coats on.

Exercise 2, pages 27-28:

Part A

1. $Vt_{prep} + Prep$, Jill looked at John. (Reason: The preposition at cannot be shifted out beyond the NP^2.)

2. $Vt_{dir} + Dir$, Neil threw the ball into the basket. (Reasons: throw is a transitive verb, and into the basket converts to the question where to?)

3. $Vt_{prep} + Prep$, The girls flirted with the boys. (Reason: with cannot be shifted out beyond the NP^2.)

4. Vt_{prep} + Prep, The boys kicked at the door. (Reason: Same as #1, 3. There are other possibilities: at the door could be a Loc answering at what place the kicking was done, in which case kick would be an intransitive verb.)

5. Vt_{prt} + Prt, The boys kicked the door out. (Reason: Out is separable from the verb. The word out does not, in this sentence, seem convertible to the question where to.)

6. Vt_{prep} + Prep, The teacher objected to the noise. (Reason: Same as #1.)

7. Vt_{prep} + Prep, The women gossiped with their neighbors. (Same as #1.)

8. Vt_{prep} + Prep, The women talked about the movie. (Same as #1.)

9. Vt_{prep} + Prep, The boys depend on their leader. (Same as #1)

10. Vt_{prep} + Prep, The deer struggled against the lion. (Same as #1.)

11. Vt_{prt} + Prt, The old lady slipped on her coat. (Reason: The particle on can shift outside the NP^2, and it does not convert to the question where to.)

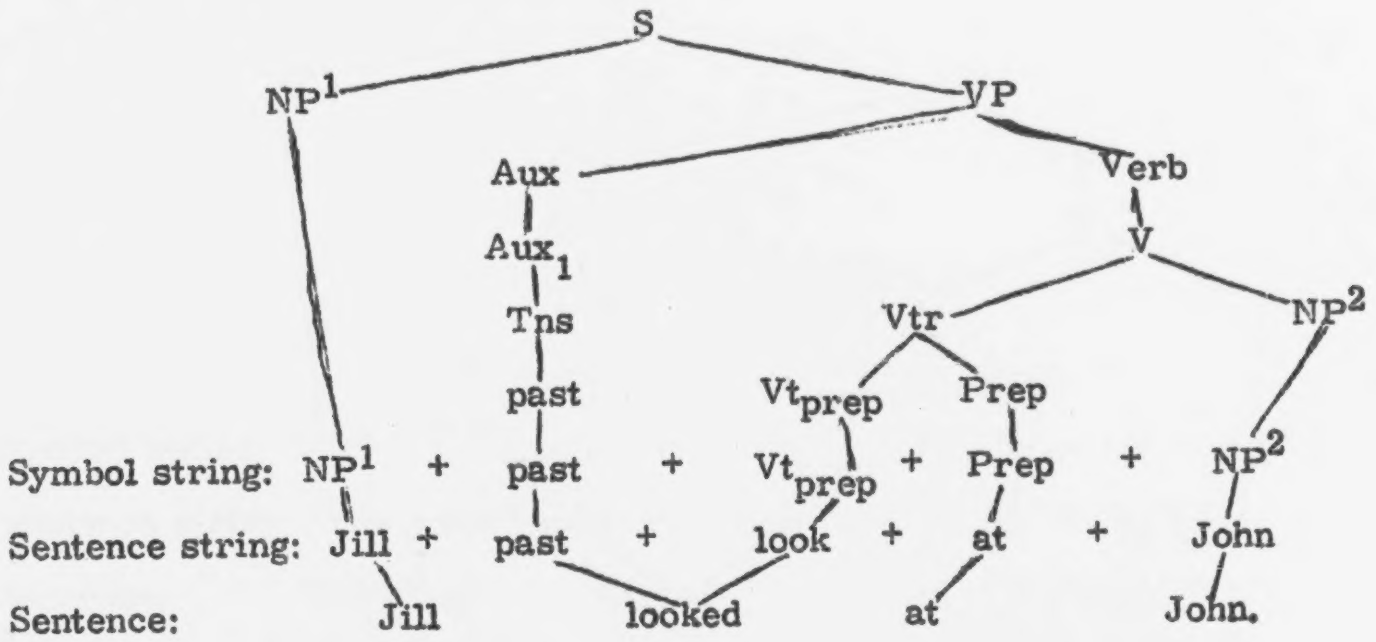
12. Vt_{prep} + Prep, The old lady slipped on a banana peel. (Reason: Same as #1.)

13. Vt_{prt} + Prt, Little Jack Horner put in his thumb. (Reason: Same as #5 and #11.)

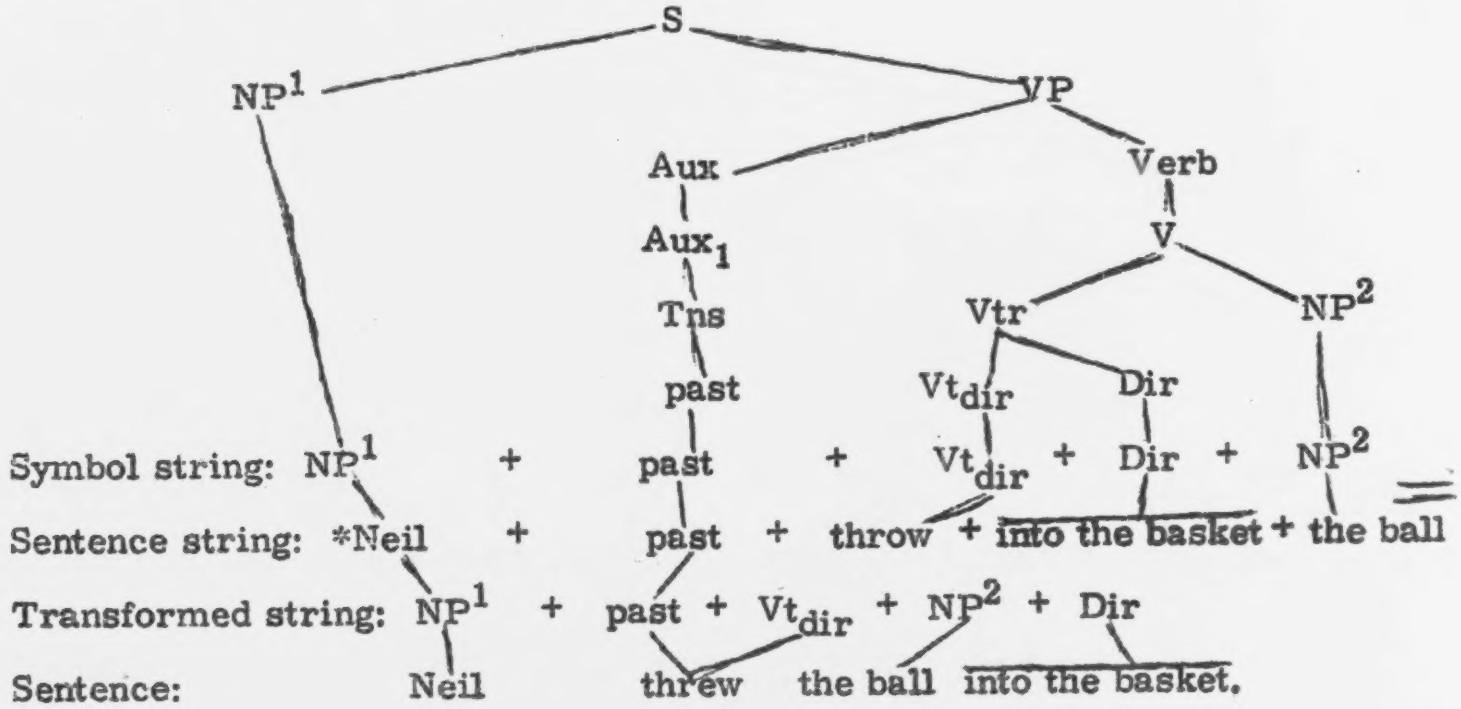
14. Vt_{prt} + Prt, Jack Horner pulled out a plum. (Same as #5 and #11.)

Part B (As in previous exercises, students should have no trouble going from Verb to V, but if they do you may want them to go through Phrase Structure Rules 7, 8 and 9.)

1. Jill looked at John.


S
NP^1
VP
Aux
Verb
Aux$_1$
V
Tns
Vtr
NP^2
past
Vt$_{prep}$
Prep
Symbol string: NP^1 + past + Vt$_{prep}$ + Prep + NP^2
Sentence string: Jill + past + look + at + John
Sentence: Jill looked at John.

2. Neil threw the ball into the basket.


S
NP^1
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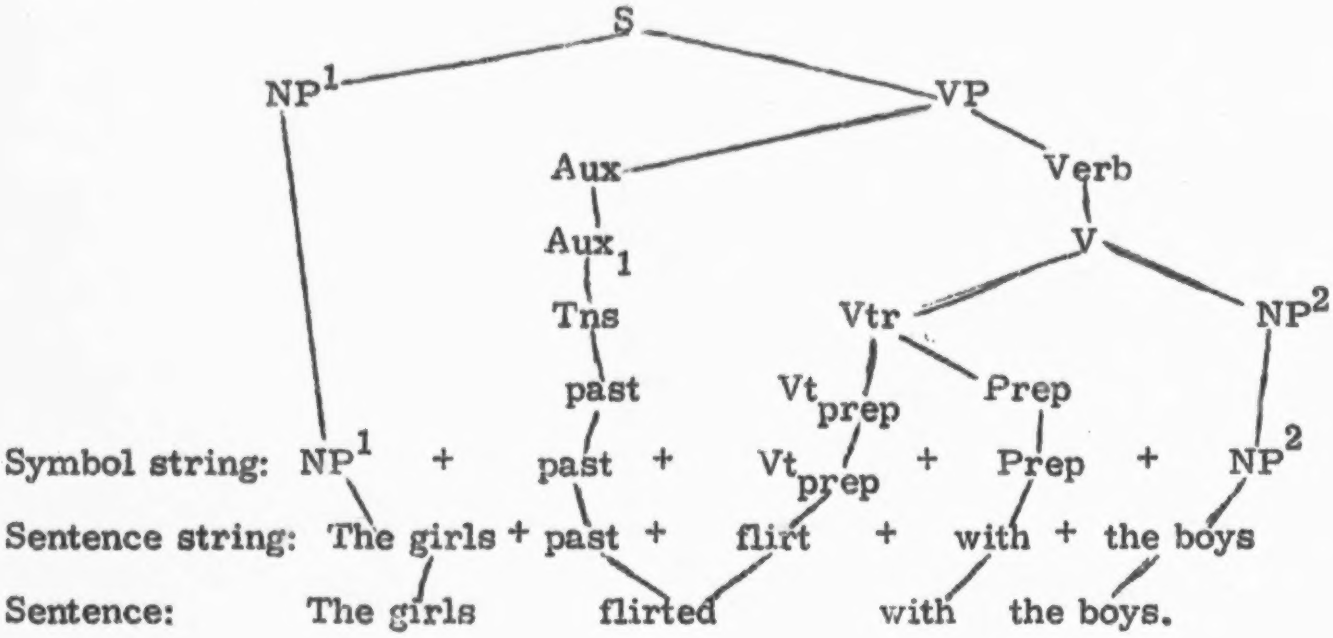
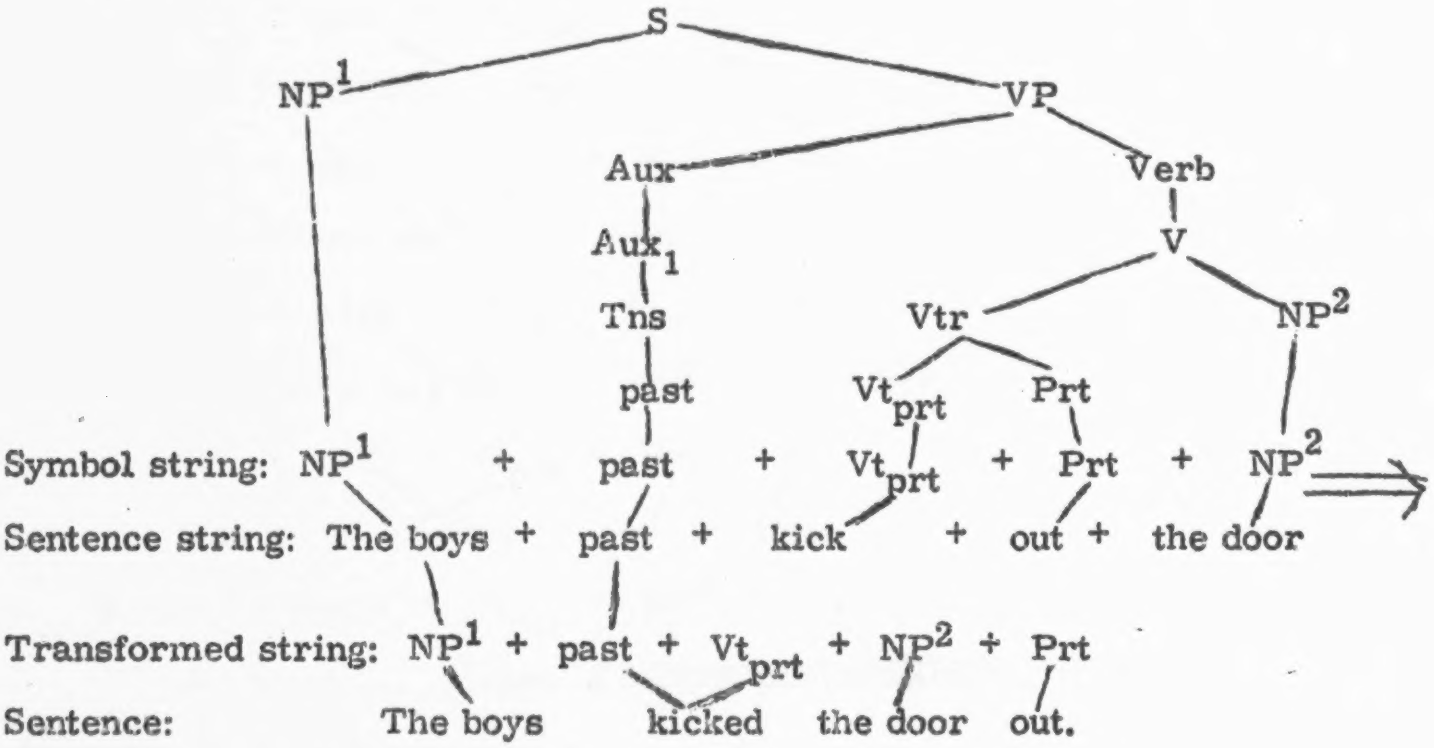
Aux
Verb
Aux$_1$
V
Tns
Vtr
NP^2
past
Vt$_{dir}$
Dir
Symbol string: NP^1 + past + Vt$_{dir}$ + Dir + NP^2
Sentence string: *Neil + past + throw + into the basket + the ball
Transformed string: NP^1 + past + Vt$_{dir}$ + NP^2 + Dir
Sentence: Neil threw the ball into the basket.

*Not grammatical

3. The girls flirted with the boys.

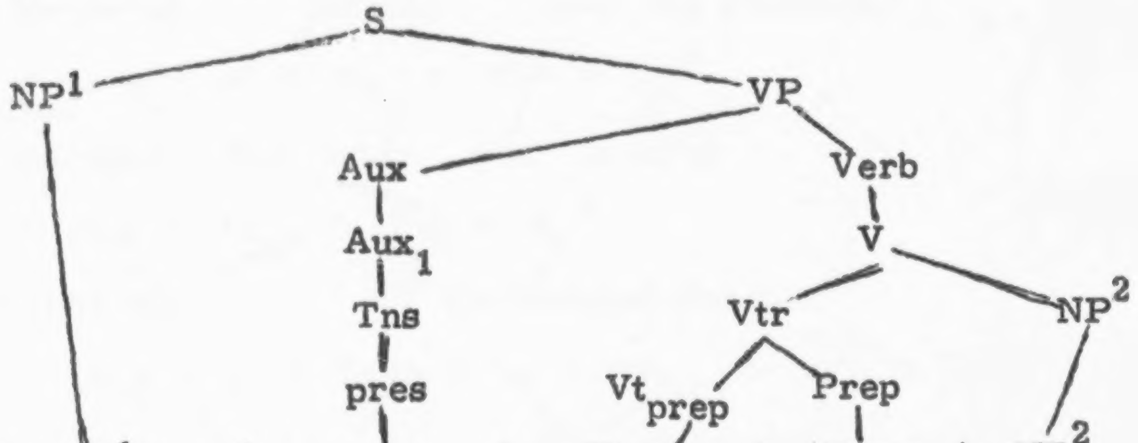

S
NP¹
VP
Aux
Verb
Aux₁
V
Tns
Vtr
NP²
past
Vt prep
Prep
Symbol string: NP¹ + past + Vt prep + Prep + NP²
Sentence string: The girls + past + flirt + with + the boys
Sentence: The girls flirted with the boys.

5. The boys kicked the door out.


S
NP¹
VP
Aux
Verb
Aux₁
V
Tns
Vtr
NP²
past
Vt prt
Prt
Symbol string: NP¹ + past + Vt prt + Prt + NP²
Sentence string: The boys + past + kick + out + the door
Transformed string: NP¹ + past + Vt prt + NP² + Prt
Sentence: The boys kicked the door out.

(In this case, of course, the transformation is optional.)

9. The boys depend on their leader.



Symbol string: NP^1 + pres + Vt_{prep} + Prep + NP^2

Sentence string: The boys + pres + depend + on + their leader

Sentence: The boys depend on their leader.

Exercise 3, page 28:

Answers will vary, but they will be somewhat like the following examples:

1. NP^1 + past + Vt_{prep} + Prep + NP^2
   His reputation depended upon his work.
2. NP^1 + past + Vt_{prt} + NP^2 + Prt
   The robber held him up.
3. NP^1 + pres + Vt_{prep} + Prep + NP^2
   The class argues with the teacher.
4. NP^1 + past + Vt_{prt} + Prt + NP^2
   The girls packed up the toys.
5. NP^1 + past + Vt_{dir} + NP^2 + Dir
   A monkey tossed a banana peel toward the crowd.

Exercise 4, page 28:

1. NP^1 + pres + M + Vt_{prep} + Prep + NP^2
   We will subscribe to the magazine.

2. NP^1 + pres + be + ing + Vt$_{prt}$ + Prt + NP^2
The lawyer is looking over the evidence.

3. NP^1 + pres + M + Vt$_{io}$ + NP^3 + NP^2
The manager will make you an offer.

4. NP^1 + past + Vt$_{prt}$ + Prt + NP^2
The President called out the National Guard.

5. NP^1 + past + M + have + en + Vt$_{dir}$ + NP^2 + Dir
Keith should have advanced the bishop to that square.

6. NP^1 + past + Vt$_{prep}$ + prep + NP^2 + Tm
The tractor ran over the log yesterday.

#·7. NP^1 + past + Vt$_{dir}$ + NP^2 + Dir
The teacher extended the deadline to Tuesday.

# (Though some may wish to claim that to Tuesday is a time adverbial, a good case can be made for its being directional, especially when we think of it as answering the question "to what point?" It doesn't answer the question "When did the teacher extend the deadline.")

8. NP^1 + pres + have + en + Vt$_{io}$ + NP^3 + NP^2
Maria has sung her father a song.

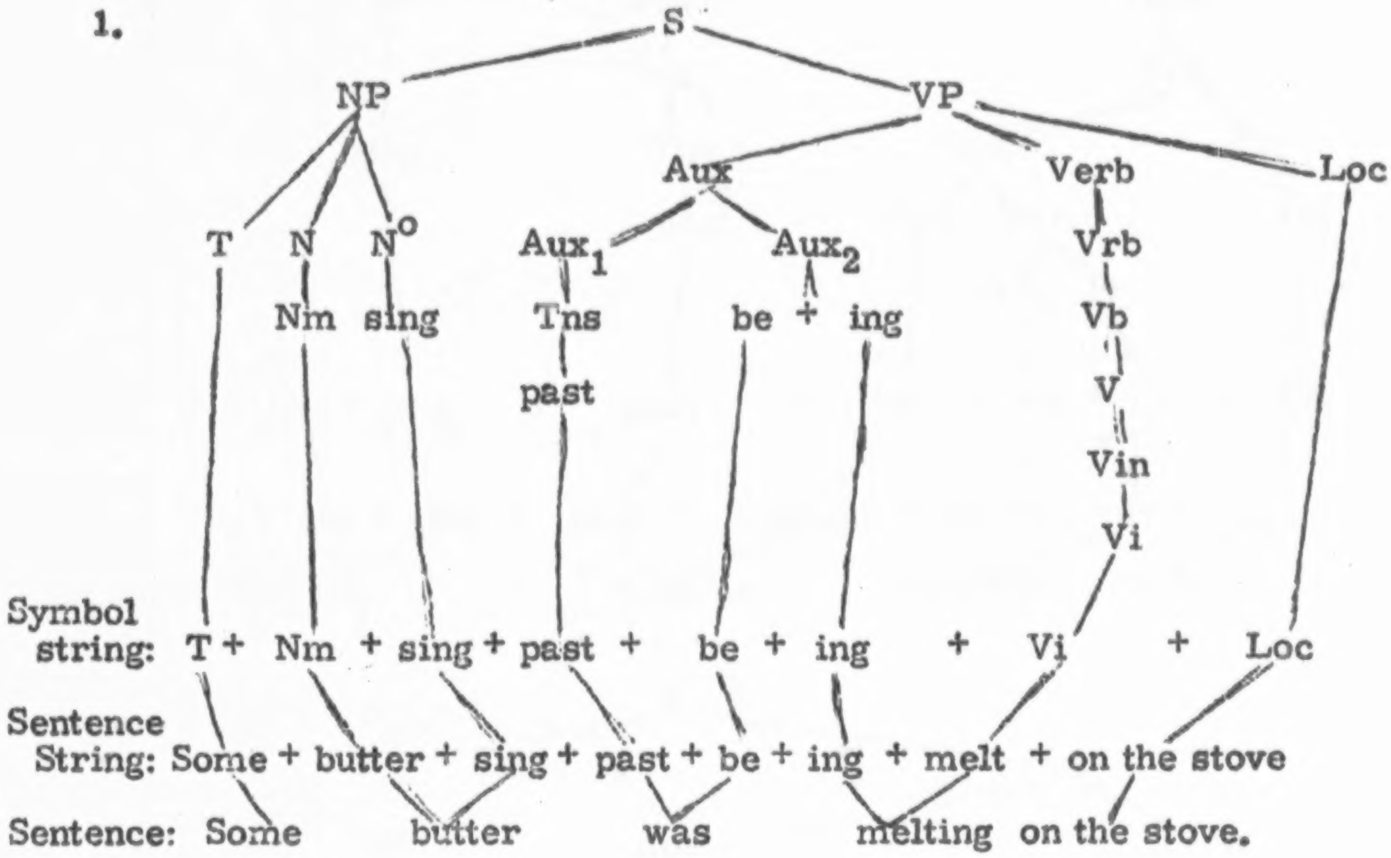
9. NP^1 + past + have + en + Vt$_{prt}$ + NP^2 + Prt + Man
The cat had lapped the milk up quickly.

10. NP^1 + past + Vt$_{prep}$+ Prep+ NP^2
The cousins carried on a correspondence.

Cumulative Review, p. 29: (The diagrams will have to be of the underlying kernels, since your students won't know how to diagram a transformed sentence. This will be a problem only for #4, in which the sentence produced by the diagram requires a transformation.)

Part A

1.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NP
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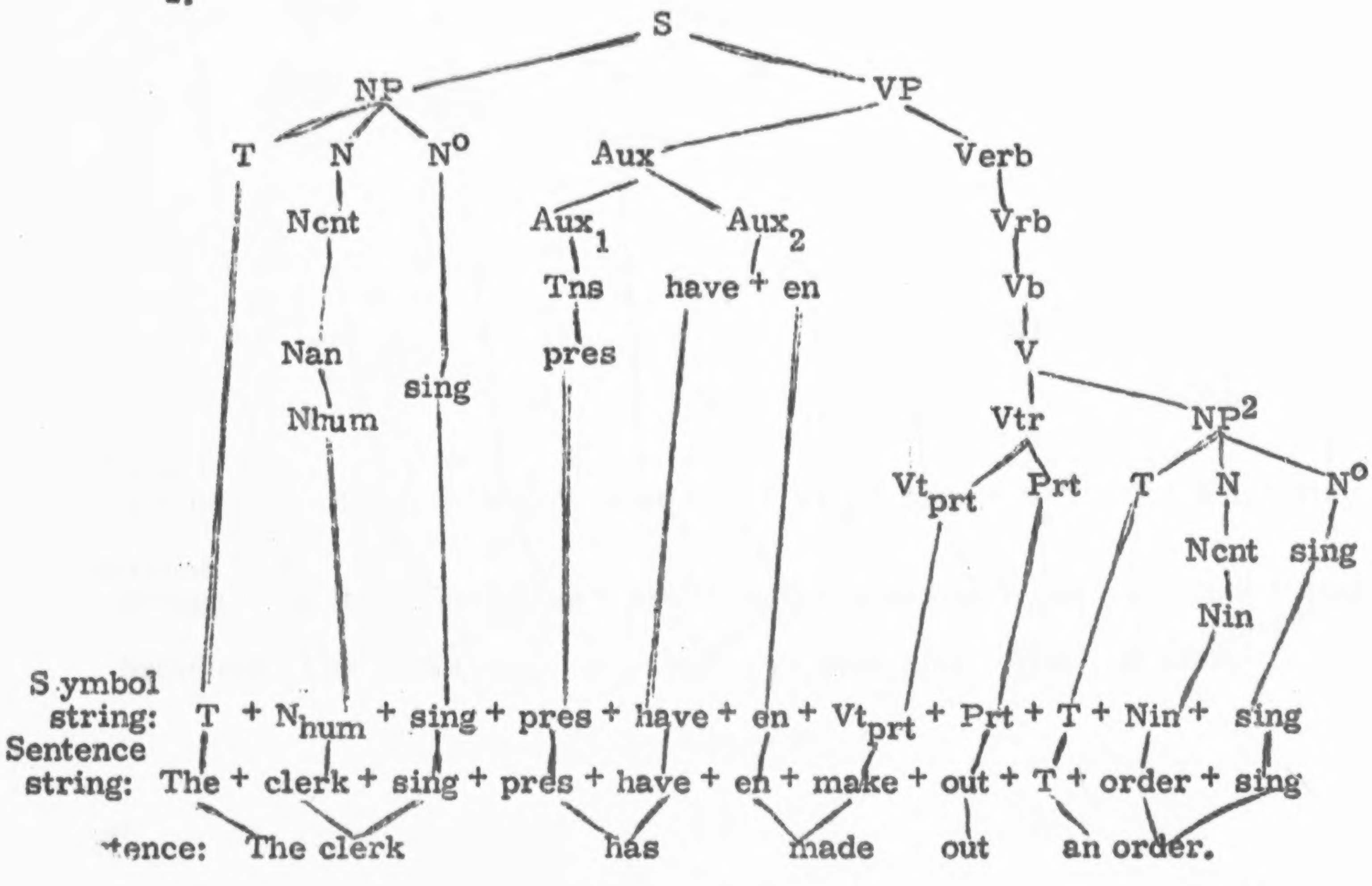
Aux1
Aux2
Vrb
Nm
sing
Tns
be + ing
Vb
past
V
Vin
Vi
Symbol string: T + Nm + sing + past + be + ing + Vi + Loc
Sentence String: Some + butter + sing + past + be + ing + melt + on the stove
Sentence: Some butter was melting on the stove.

2.


S
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VP
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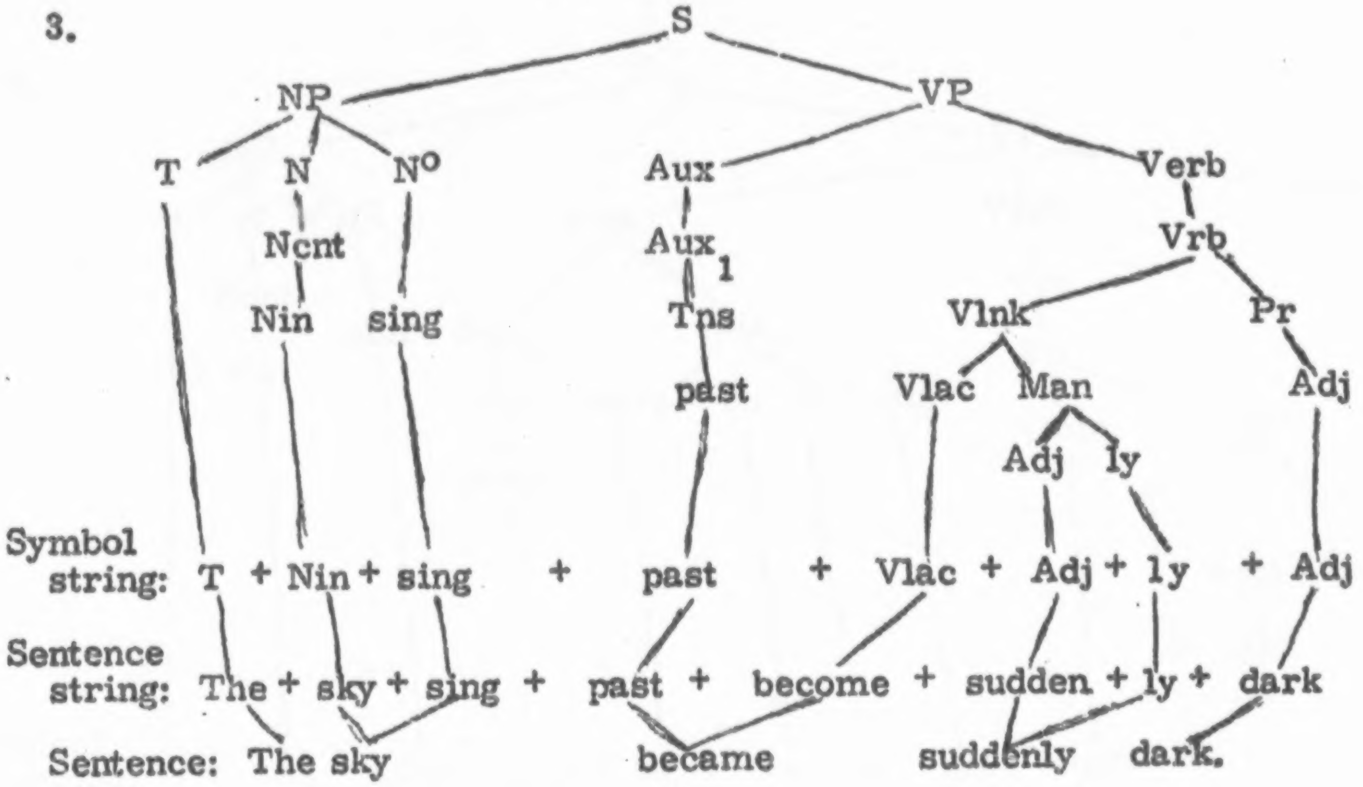
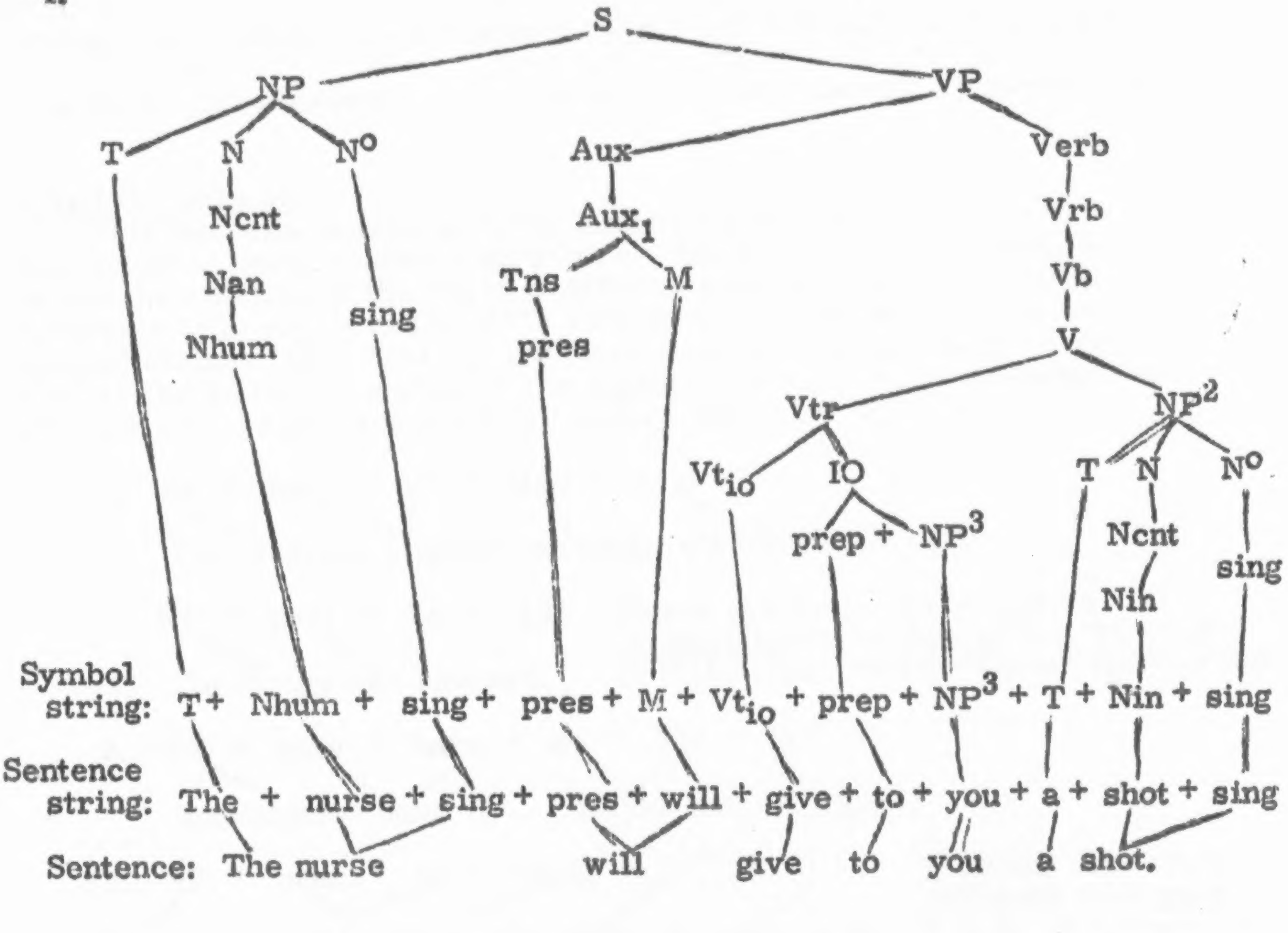
N
N^o
Aux
Verb
Ncnt
Aux1
Aux2
Vrb
Tns
have + en
Vb
Nan
pres
V
sing
Nhum
Vtr
NP2
Vtprt
Prt
T
N
N^o
Ncnt
sing
Nin
Symbol string: T + Nhum + sing + pres + have + en + Vtprt + Prt + T + Nin + sing
Sentence string: The + clerk + sing + pres + have + en + make + out + T + order + sing
tence: The clerk has made out an order.

3.


S
NP
VP
T
N
N°
Aux
Verb
Ncnt
Aux
1
Vrb
Nin
sing
Tns
Vlnk
Pr
past
Vlac
Man
Adj
Adj
ly
Symbol string: T + Nin + sing + past + Vlac + Adj + ly + Adj
Sentence string: The + sky + sing + past + become + sudden + ly + dark
Sentence: The sky became suddenly dark.

4.


S
NP
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Aux
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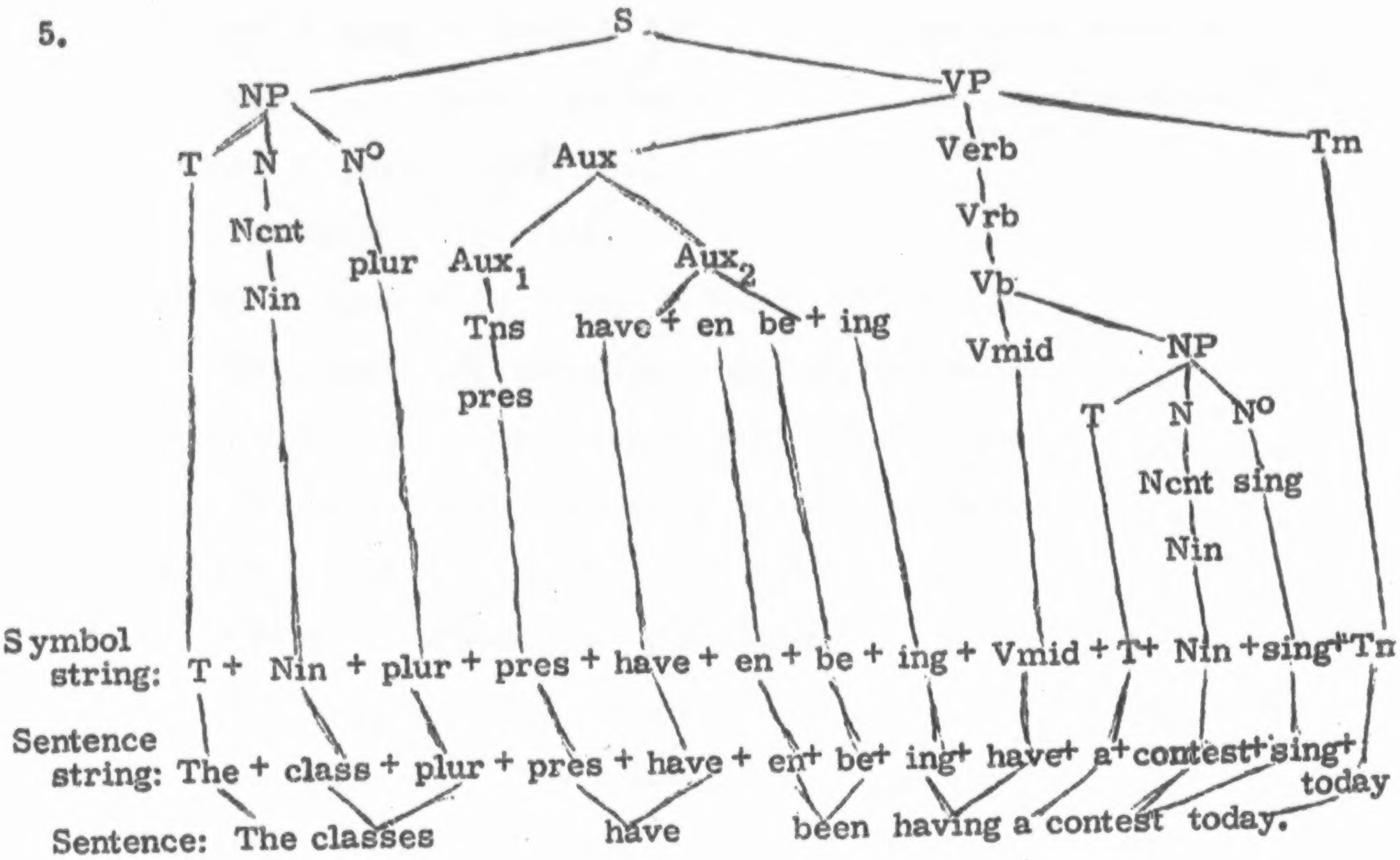
Aux
1
Vrb
Nan
sing
Tns
M
Vb
Nhum
pres
V
Vtr
NP²
Vt
io
IO
T
N
N°
prep +
NP³
Ncnt
sing
Nin
Symbol string: T + Nhum + sing + pres + M + Vtio + prep + NP³ + T + Nin + sing
Sentence string: The + nurse + sing + pres + will + give + to + you + a + shot + sing
Sentence: The nurse will give to you a shot.

5.


S
NP
VP
T
N
N^o
Aux
Verb
Tm
Ncnt
Nin
plur
Aux1
Aux2
Tns
pres
have + en
be + ing
Vrb
Vb
Vmid
NP
T
N
N^o
Ncnt
sing
Nin
Symbol string: T + Nin + plur + pres + have + en + be + ing + Vmid + T + Nin + sing + Tm
Sentence string: The + class + plur + pres + have + en + be + ing + have + a + contest + sing + today
Sentence: The classes have been having a contest today.

B and C, page 29:

This exercise should give the student an opportunity to check his knowledge of basic sentence structure. Because it is important for him to see the relation of the various parts to each other, it is probably not desirable to break down the NP's into their component parts in the symbol strings (C). That is, his knowledge of what is meant by NP^1 and NP^2 as far as their function in the sentence is concerned can better be shown if he writes the symbol NP rather than T + N + N.

1. NP + past + Vi + Man + Loc
The children sneaked carefully through the house.

NP + past + Be + Adj
The house was haunted.

(Some students will recognize that haunted is a derived form. See page 3 of this manual for additional explanation.)

2. NP + pres + have + en + Vtr + NP^2
Insecticides have killed some birds.

#3. NP + pres + M + Vmid + NP^2 + Tm
You will have the exam at some time.

(Students may have difficulty with your. It can, of course, be shown to be an example of possessive embedding:

$NP + pres + Vmid + NP$
You have the exam.

. . .the exam which you have. . . ⇒
. . .the exam you have. . . ⇒
. . .your exam. . .)

$NP + pres + Be + Adj$
The exam is big.

4. $NP + pres + be + ing + Vtr + NP^2 + Tm$
The juniors are attending school this week.

$NP + pres + be + ing + Vtr + NP^2 + Tm$
The seniors are attending school this week.

5. $NP + past + Vt_{prt} + Prt + NP^2$
The father called up the teacher.

$NP + pres + V_{mid} + NP$
The girl has a father.

#6. $NP + pres + be + ing + Vt_{prt} + Prt + NP^2 + Tm$
Someone is picking up the donations on Monday.

7. $NP + past + Vt_{dir} + Dir + NP^2$
Crawford brought to the party bread.

$NP + past + Vt_{dir} + Dir + NP^2$
Crawford brought to the party pickles.

8. $NP + past + Vt_{prep} + Prep + NP^2$
The experiment called for sulfuric acid.

$NP + past + Vt_{prep} + Prep + NP^2$
The experiment called for sodium chloride.

(Good students may wish to indicate that underlying sulfuric acid is The acid is sulfuric; and that The chloride is sodium underlies sodium chloride. If they think of the whole as a kind of compound noun you should accept it. In more advanced courses the derivation of these terms will be discussed.)

9. $NP + past + V_{id} + Dir$
The mouse crawled into the hole.

$NP + past + Be + Adj$
The mouse was small.

$NP + past + V_{mid} + NP$

The snake had a hole.

10. $NP + past + Vt_{dir} + Dir + NP^2$

Snorky dragged into the house the bone.

11. $NP + past + Vt_{io} + IO + NP^2$

Gerry brought for her mother a plant

(*To* would also be accurate as the preposition.)

$NP + pres + V_{mid} + NP$

She has a mother.

(*Her* is derived in the same way as *your* in #3 by possessive embedding:
. . . the mother which she has. . . $\Longrightarrow$
. . . the mother she has. . . $\Longrightarrow$
. . . her mother. . .)
Some people treat possessive pronouns as kinds of determiners. There has been no discussion of this so far in this grammar, however.)

12. $NP + past + Vtr + NP^2$

I gave the report.

$NP + past + be + ing + Vtr + NP^2 + Loc$

I was preparing the report in the library.

(# In #3 it is not possible to reconstruct the time element which has become *when* in the question. But the fact that it is a *when* question tells us that there was a time element in the underlying kernel. You may allow your students to supply some arbitrary time element (e. g. tomorrow, or at ten o'clock, etc.) or to simply write the indefinite *at some time*. In #6 the same situation exists with regard to the subject NP of the original kernel. It has gone through the passive transformation and then the agent has been deleted. Therefore, we can most accurately supply an indefinite *someone*. However, if your students supply an arbitrary element (the man, the committee, the Salvation Army, etc) accept their answers. The important thing is to recognize that some element which existed in the underlying kernel is not in the surface sentence.)

Introduction to the Teacher

The study of determiners could very easily provide the basis for several years of study for our students. The material which precedes and follows nouns in English sentences is structured in a very complex fashion, the parts interacting in a way which puts the largest single stumbling block in the path of those speakers of other languages who try to learn ours. The unit at hand is a very simple first step into a fascinating part of English structure.

Rule 13 rewrites NP as $T + N + N^{o}$: Rule 19 rewrites T as Art. Art will work itself into more complex structures in later units, but in the interest of simplicity we will not introduce everything at once.

The four items the, a, an, and some divide themselves quite naturally into the, on the one hand, and the others, on the other.

The occurs in contrast to the other three as is shown by reading row A against row B:

1 2 3 4
A. A car---, an apple---, some rice---, some apples.

B. The car---, the apple---, the rice---, the apples.

But the three items a, an, some are mutually exclusive; where one can occur the other two cannot, as can be seen by trying to substitute one for the other in the four columns of row A, above.

The simplest deduction to be made from these facts is that a, an, and some are different pronunciations of the same meaningful element, just as the -im of cherubim, seraphim; the -en of oxen; and the -s of cats represent different and mutually exclusive pronunciations of the same meaningful element, which we call plural, Pl. The meaningful element which is variously realized as a, an, or some we have called (very traditionally) the indefinite article, Art. indef. The definite article we have called Art def.

The problem of two kinds of some can be attacked in various ways. The two kinds contrast in the usual readings of

(1) Some girls have blue eyes.
(2) Some girls are having a party.

The noun phrase of (1) could be followed by but not all. (1) contains a demonstrative some. Of course (2) can be read in such a way that but not all could follow the NP, but the change of the accentuation and pronunciation of some is obvious when this is done. Perhaps one of the most convincing demonstrations of the difference between the two some's is a list of sentences like the following:

(3) I found some rice in the kitchen
(4) paint
(5) garbage
(6) boy

The accentuation and pronunciation of *some* must be changed in (6) from what it was in (3), (4), and (5); otherwise *boy* will seem to be a mass noun, perhaps the name of some material like *wood* or *paint*.

Only the demonstrative *some* is grammatical in (1). However, the rules we present in this unit are not sufficiently detailed to exclude the ungrammatical occurrences of *some* as an indefinite article. Your students may not recognize this kind of ungrammaticality, unless it is pointed out to them. They will probably give the ungrammatical strings grammatical readings. The rules they have will generate strings which *look* just like (1) above. But they don't have the rules which will generate the string which can have *but not all* added to it. That is, they don't have the rules for demonstratives yet. Your students will probably reject such ungrammatical strings as

(7) *Some secretaries are some philosophers

where no reading is grammatical.

The rules which prevent such sentences as (7) are context-sensitive ones and are best saved for later units since they draw attention away from the points we wish to make in this unit. But if the question should arise you can talk about the differences between *some* which is demonstrative and the *some* which is an indefinite article.

We have not made use of pronunciation rules explicitly before this unit. What the pronunciation rules for *Art indef* say is

a) that the indefinite article is *some* before mass nouns and plural countable ones, but *an* elsewhere.

and b) that *an* loses its *n* before consonants.

There will inevitably be questions about sentences like

A rice that grows well . . ., etc.

where the mass noun (rice) follows *a*, a form which the pronunciation rules above indicate can occur only with singular count nouns. This can very simply be explained as a matter of deletion. Words like *type*, *kind*, *species*, etc., sometimes occur with *of* between the article and a mass noun. We find

a *kind of* rice
a *type of* blood
a *species of* wheat

The indefinite articles in these cases are the ones which we select before count nouns. They are, in other words, selected because they precede the count nouns *kind*, *type*, *species*. But *kind of*, *type of*, *species of* can be deleted leaving the indefinite article *a* before the mass nouns *rice*, *blood*, *wheat*, etc. We can write a transformational rule for the deletion that occurs in these cases. We will assign the symbol X to nouns of the class which includes *type*, *kind*, etc. Then the rule could be written in this way:

optionally: $Art + X + of + N_m \Longrightarrow Art + N_m$

The order of the application of transformational rules of this type is just as critical as the ordering of the Phrase Structure rules. If this deletion rule should be applied *before* the rule which gives the article its proper form, the article, which would then be right before the mass noun, would take the form *some*.

$$Art_{indef} + N_m \Longrightarrow some + N_m$$

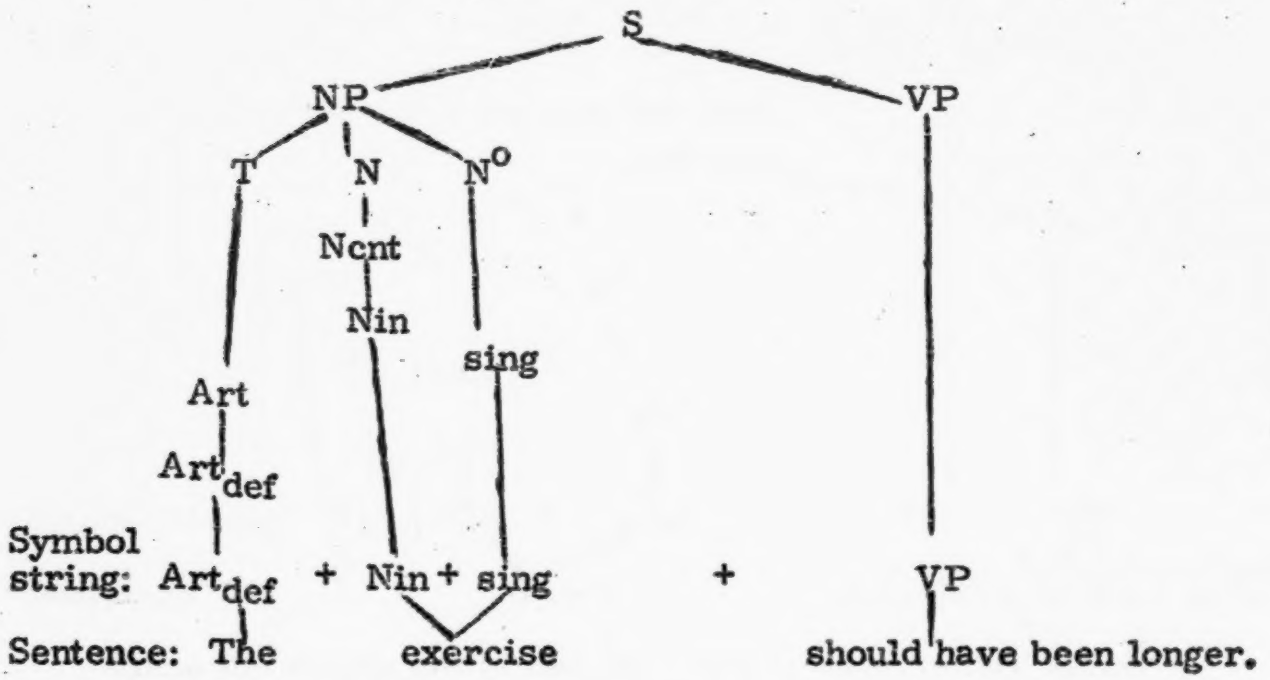
Thus it is obvious that the rule which gives the article its proper form must be applied before the deletion in order to account for such phrases as *a rice*, *a blood*, etc. These phrases contain the meaning of the deleted part. They invariably mean some thing like *a kind of*. . ., *a variety of* . . ., etc.

We suggest that you read the entire unit and the *Teacher's Manual* before teaching the unit so that you can see where it is going.

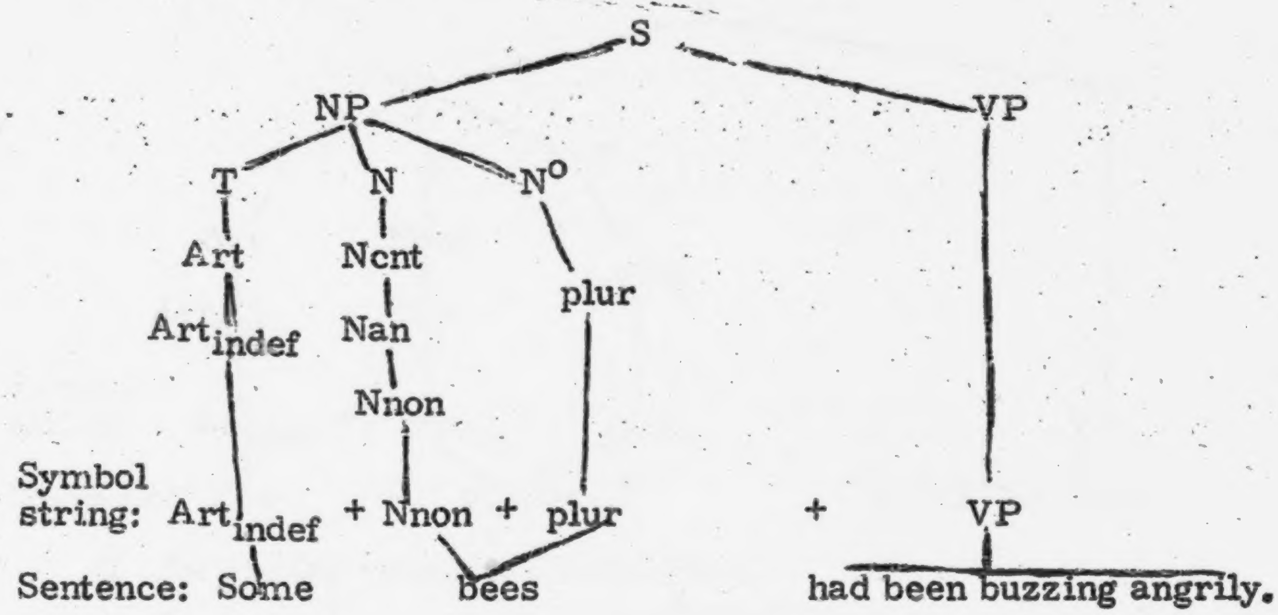
Exercise 1, Page 30:
Obviously no key is necessary for this exercise. Its purpose is simply to illustrate the importance of determiners and to arouse some questions which the unit will try to answer.

Exercise 2, Page 34:
(The VP's haven't been developed.)

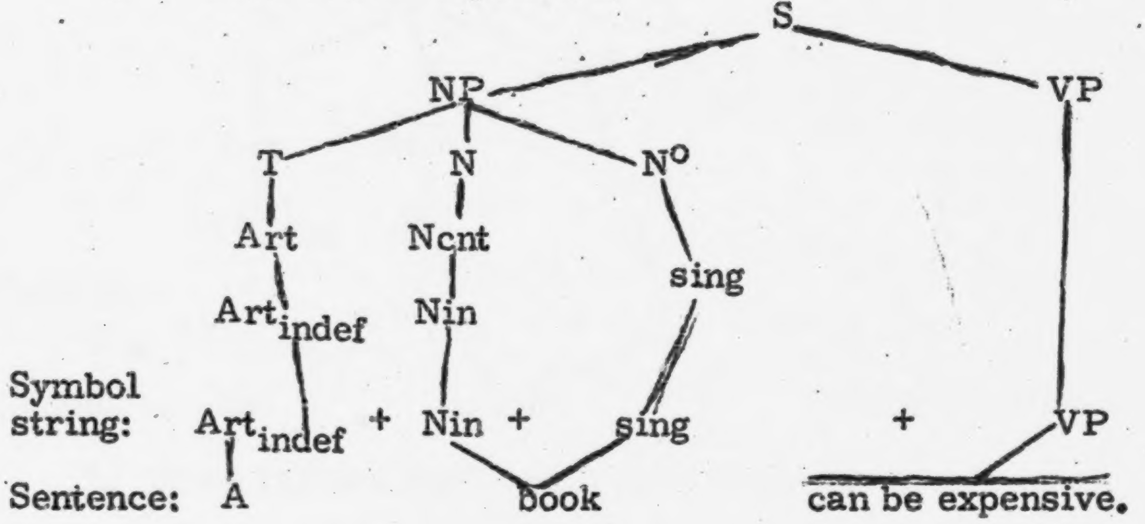
1. The exercise should have been longer.


S
NP
VP
T
N
N^o
Ncnt
Nin
sing
Art
Art$_{def}$
Symbol string: Art$_{def}$ + Nin + sing + VP
Sentence: The exercise should have been longer.

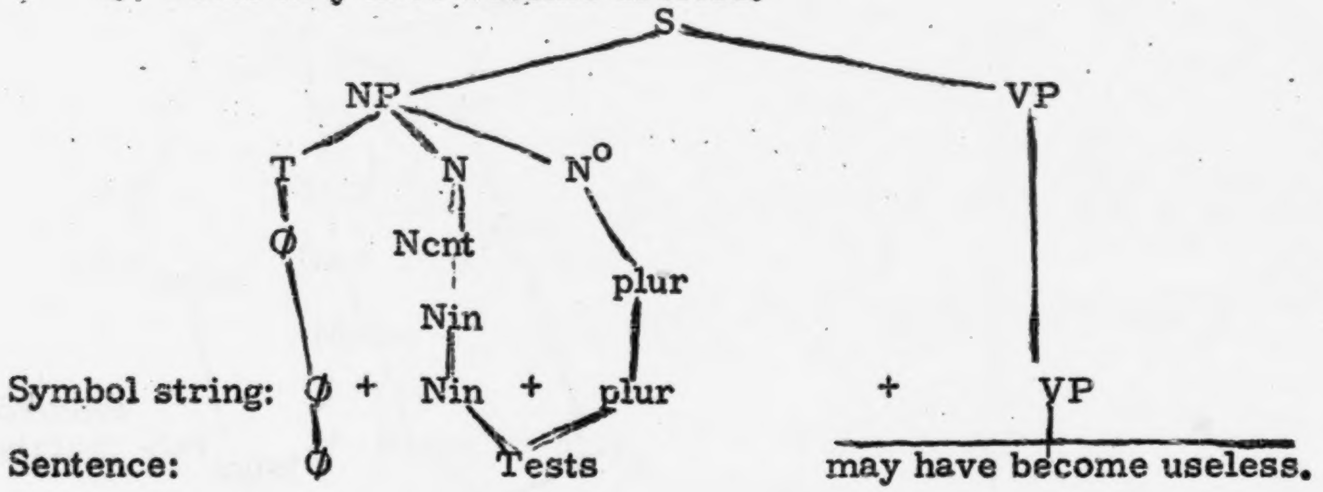
2. Some bees had been buzzing angrily.


S
NP
VP
T
N
N^o
Art
Ncnt
plur
Art indef
Nan
Nnon
Symbol string: Art indef + Nnon + plur + VP
Sentence: Some bees had been buzzing angrily.

3. A book can be expensive.

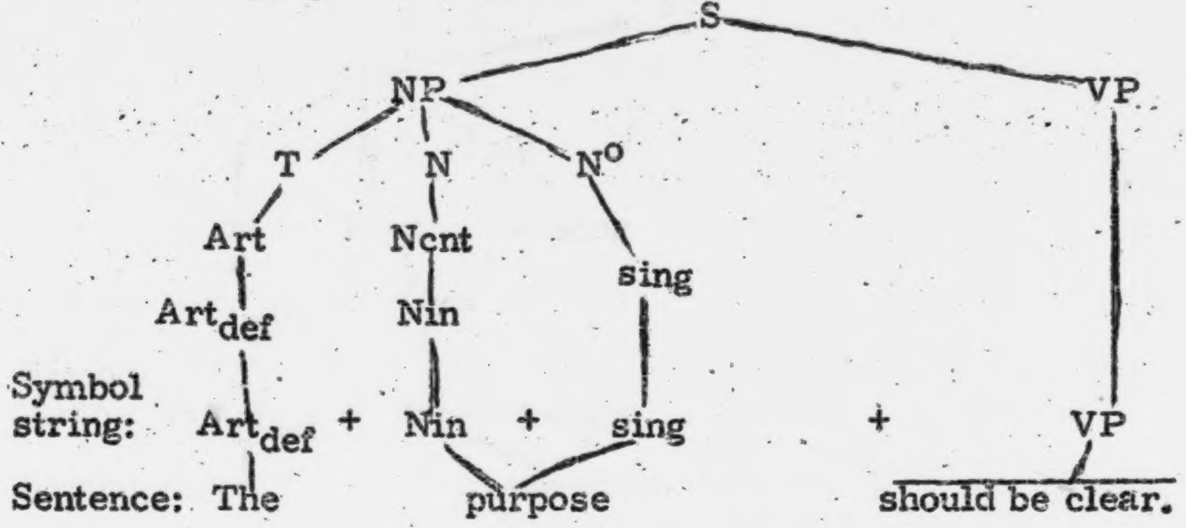

S
NP
VP
T
N
N^o
Art
Ncnt
sing
Art indef
Nin
Symbol string: Art indef + Nin + sing + VP
Sentence: A book can be expensive.

4. Tests may have become useless.


S
NP
VP
T
N
N^o
Ø
Ncnt
plur
Nin
Symbol string: Ø + Nin + plur + VP
Sentence: Ø Tests may have become useless.

Since the empty set of determiners is used in this sentence, use the null sign (Ø) to indicate this selection.

5. The purpose should be clear.


S
NP
VP
T
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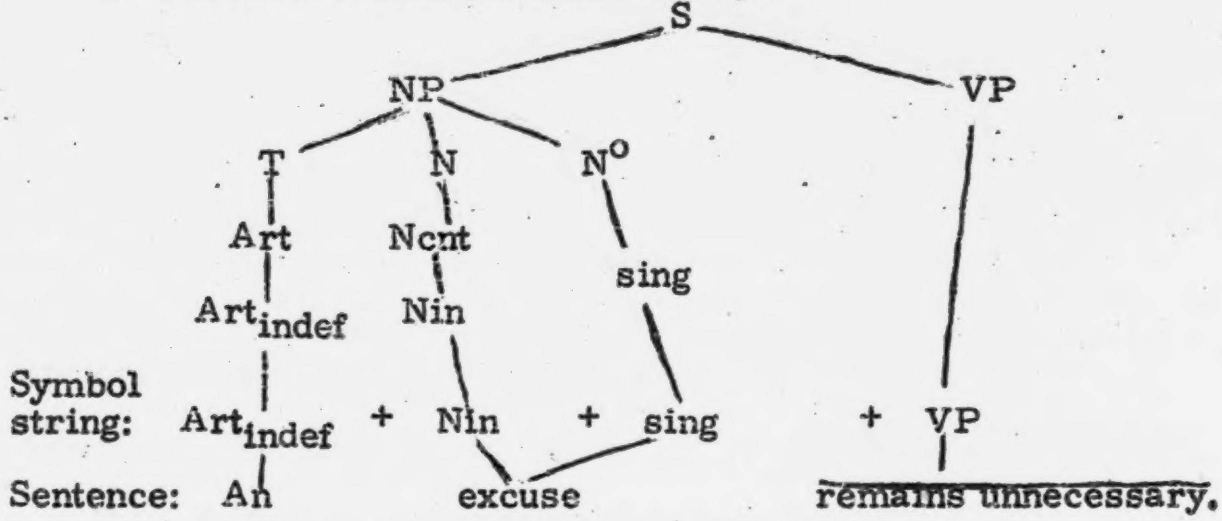
N°
Art
Ncnt
sing
Artdef
Nin
Symbol string: Artdef + Nin + sing + VP
Sentence: The purpose should be clear.

6. An excuse remains unnecessary.


S
NP
VP
T
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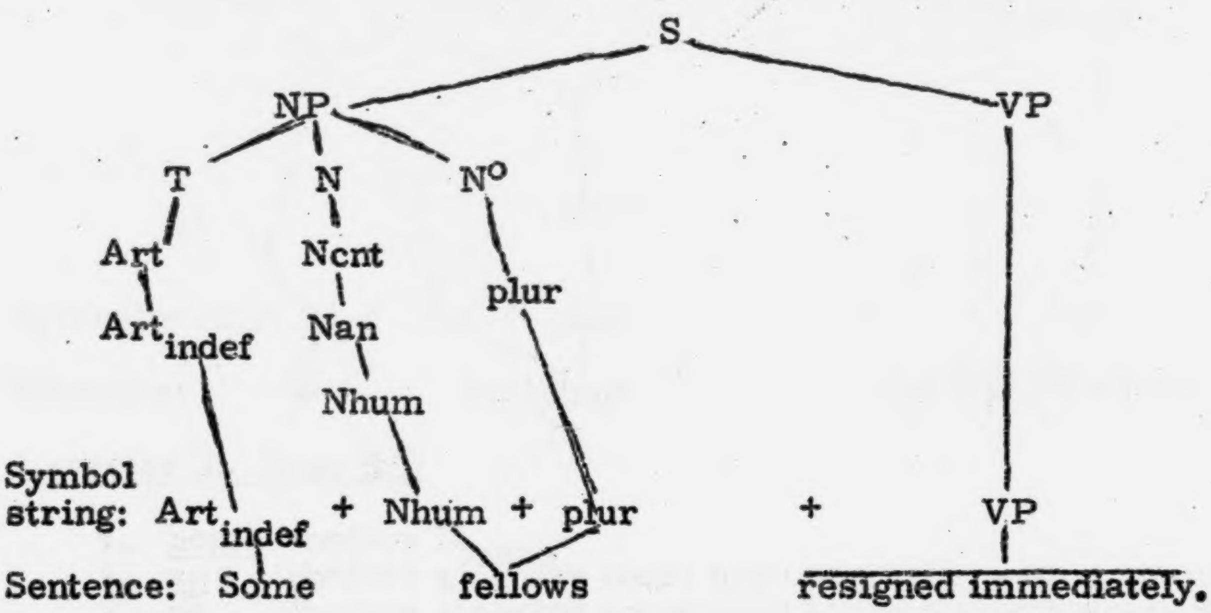
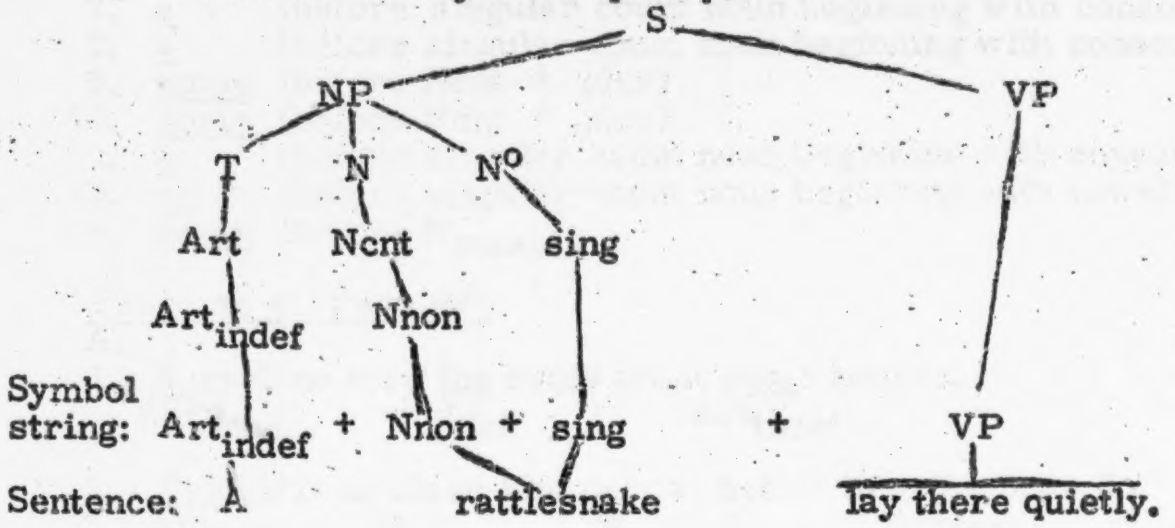
N°
Art
Ncnt
sing
Artindef
Nin
Symbol string: Artindef + Nin + sing + VP
Sentence: An excuse remains unnecessary.

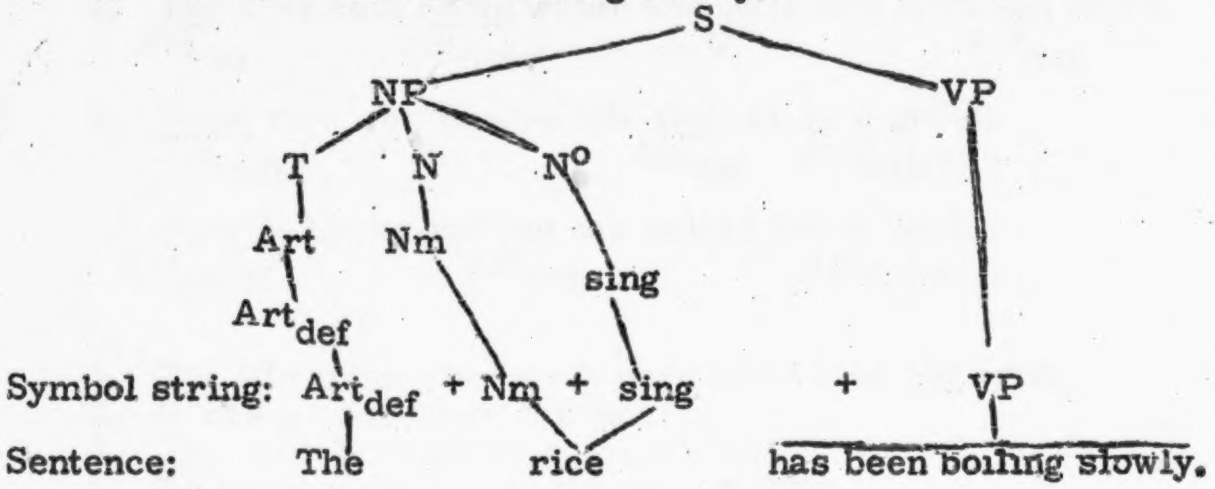
7. Some fellows resigned immediately.


S
NP
VP
T
N
N°
Art
Ncnt
plur
Artindef
Nan
Nhum
Symbol string: Artindef + Nhum + plur + VP
Sentence: Some fellows resigned immediately.

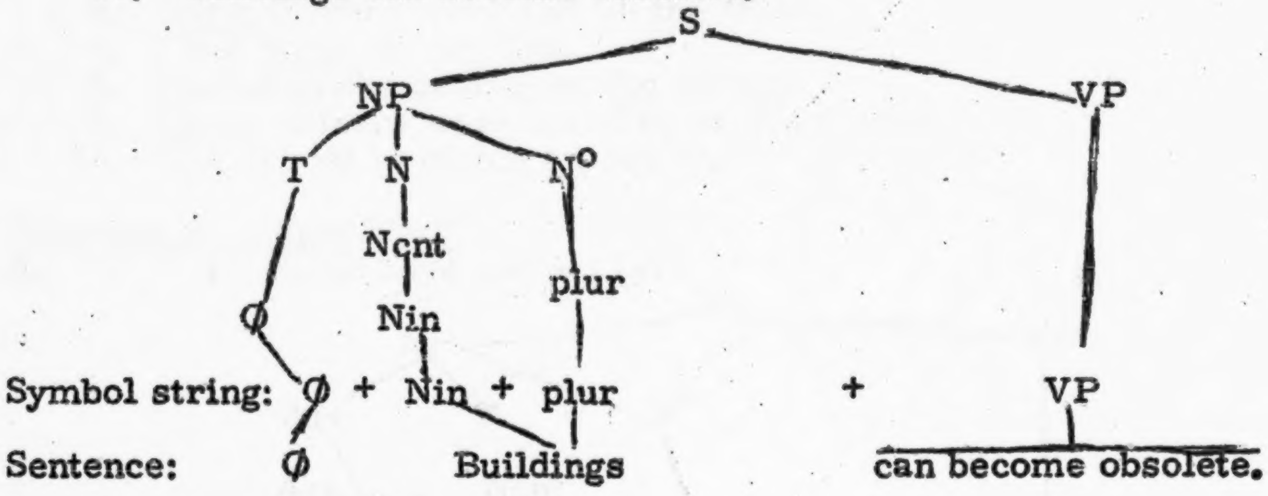
8. A rattlesnake lay there quietly.


S
NP
VP
T
N
N^o
Art
Ncnt
sing
Art$_{indef}$
Nnon
Symbol string: Art$_{indef}$ + Nnon + sing + VP
Sentence: A rattlesnake lay there quietly.

9. The rice has been boiling slowly.


S
NP
VP
T
N
N^o
Art
Nm
sing
Art$_{def}$
Symbol string: Art$_{def}$ + Nm + sing + VP
Sentence: The rice has been boiling slowly.

10. Buildings can become obsolete.


S
NP
VP
T
N
N^o
Ncnt
plur
Nin
∅
Symbol string: ∅ + Nin + plur + VP
Sentence: ∅ Buildings can become obsolete.

Exercise 3: Page 35:

1. Some (before N_{mass})
2. an (before singular count noun beginning with a vowel)
3. an (before singular count noun beginning with a vowel)
4. some (before Ncnt + plur)
5. some (before N_{mass})

6. some (before Ncnt + plur)
7. a (before singular count noun beginning with consonant)
8. a (before singular count noun beginning with consonant)
9. some (before Ncnt + plur)
10. some (before Ncnt + plur)
11. a (before singular count noun beginning with consonant)
12. an (before singular count noun beginning with vowel)
13. some (before N_{mass})

Exercise 4: Page 33:

A.

1. A cyclone tore the roofs from some houses.
Art_{indef} Art_{def} Art_{indef}

2. The girls in class like dances better than the boys do.
Art_{def} $\emptyset$ $\emptyset$ Art_{def}

3. The sink held some water and leftovers from the meal.
Art_{def} Art_{indef} $\emptyset$ Art_{def}

4. Some rice was thrown into the car by a guest.
Art_{indef} Art_{def} Art_{indef}

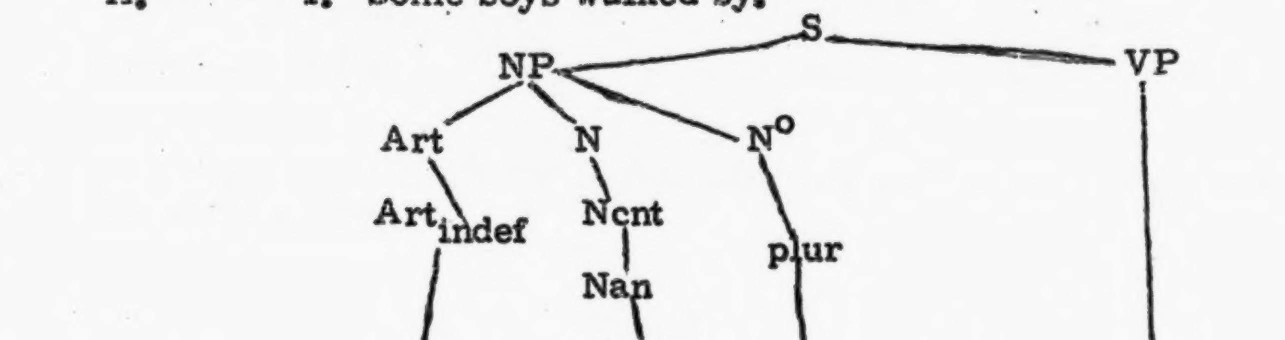
5. An axle broke and the car rolled into a ditch.
Art_{inde} Art_{def} Art_{indef}

B.

1. The librarian gave me a card and I took the book.
2. It was a book about dinosaurs.
3. The cook brought us some apples.
4. An apple a day keeps the doctor away.
5. The voters rejected the ballot measure.
6. Some flowers were left on the table.
7. I had some money left.
8. An avalanche destroyed the village.
9. Some officers were standing on the corner.
10. The school is giving an award.

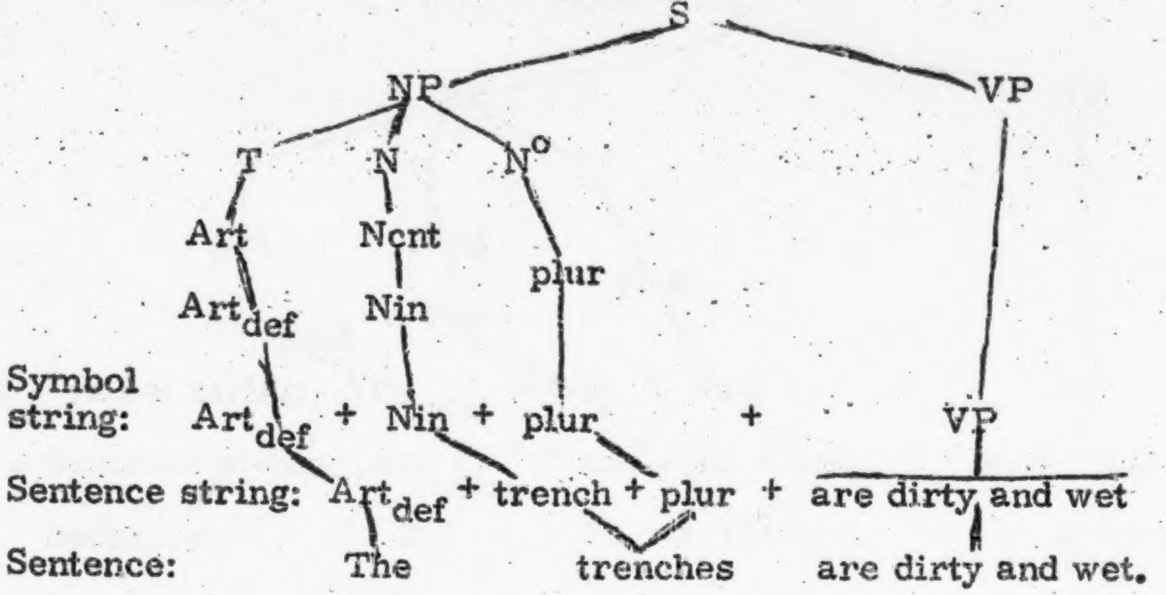
Exercise 5: Pages 32-39:

A. 1. Some boys walked by.



S
NP
VP
Art
N
N°
Art indef
Ncnt
plur
Nan
Nhum
Symbol string: Art indef + Nhum + plur + VP
Sentence string: Art indef + boy + plur + walked by
Sentence: Some boys walked by.

2. The trenches are dirty and wet.


S
NP
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Art
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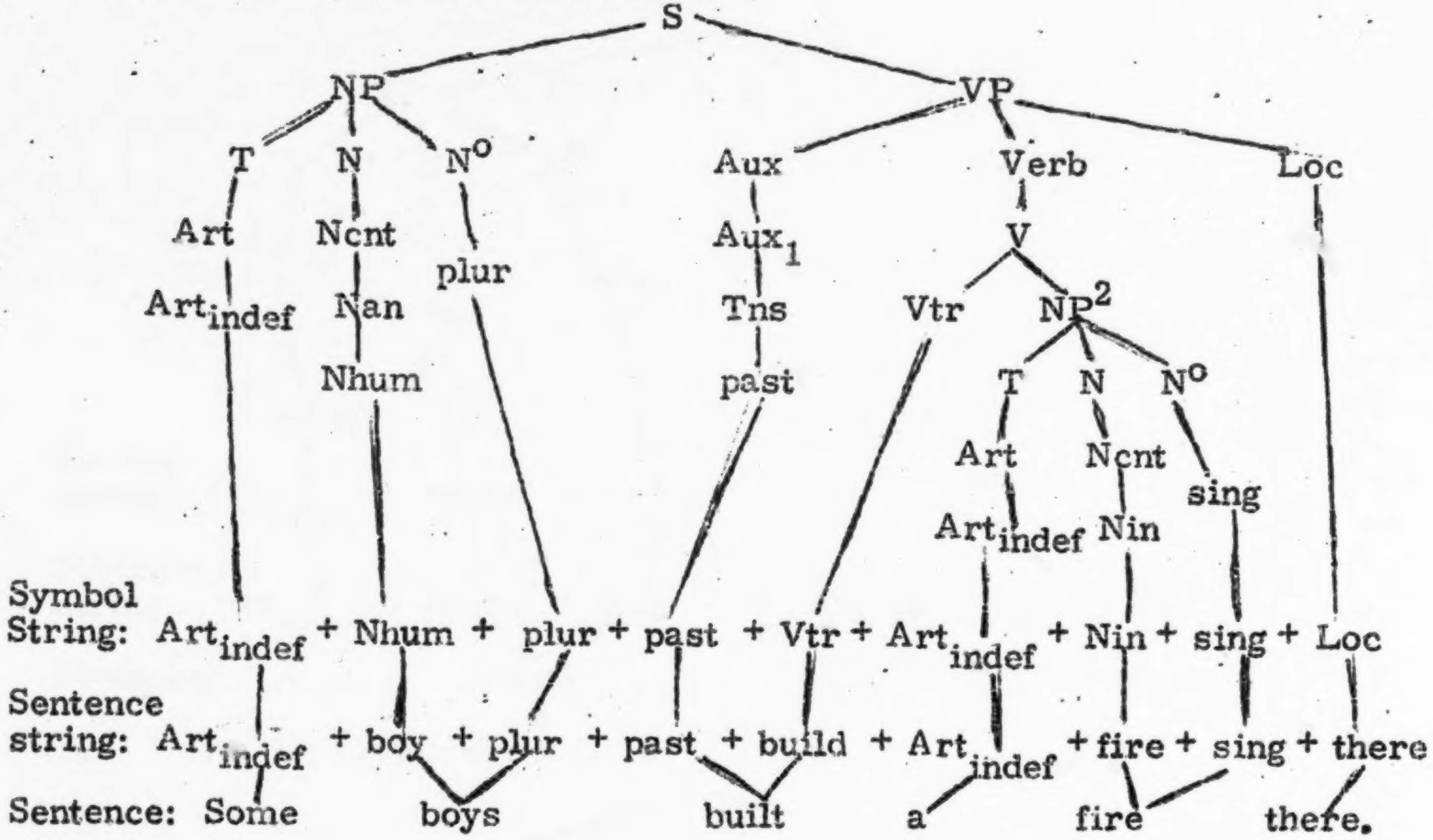
plur
Art$_{def}$
Nin
Symbol string: Art$_{def}$ + Nin + plur + VP
Sentence string: Art$_{def}$ + trench + plur + are dirty and wet
Sentence: The trenches are dirty and wet.

#3. Some boys built a fire there.


S
NP
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Aux
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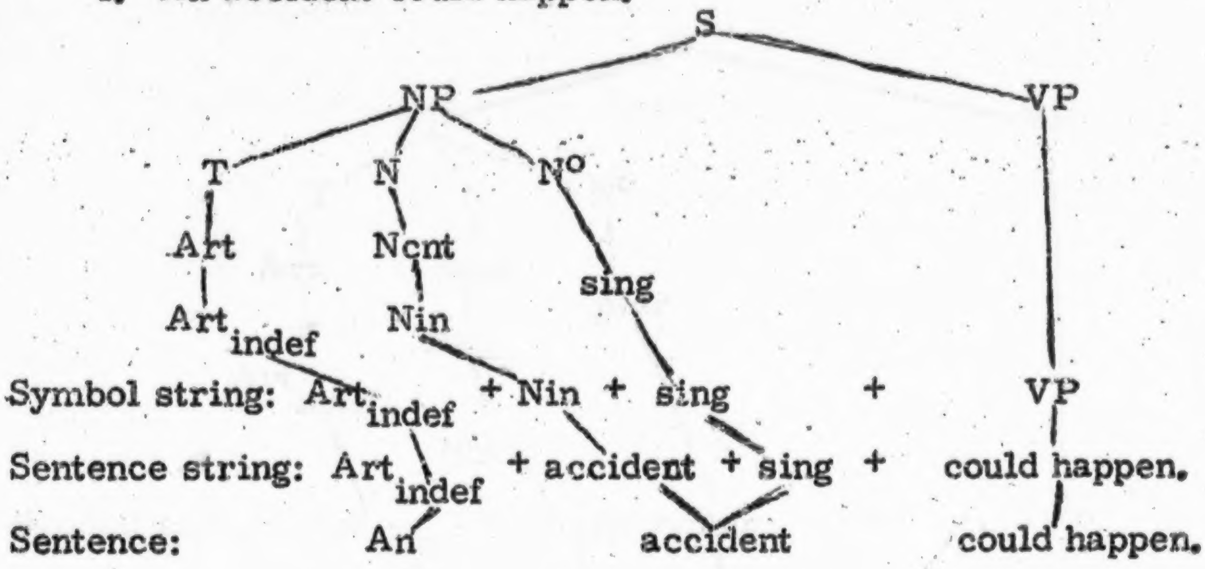
Loc
Art
Ncnt
plur
Aux$_1$
V
Art$_{indef}$
Nan
Tns
Vtr
NP^2
Nhum
past
T
N
N°
Art
Ncnt
sing
Art$_{indef}$
Nin
Symbol String: Art$_{indef}$ + Nhum + plur + past + Vtr + Art$_{indef}$ + Nin + sing + Loc
Sentence string: Art$_{indef}$ + boy + plur + past + build + Art$_{indef}$ + fire + sing + there
Sentence: Some boys built a fire there.

#We must develop the VP in this sentence so that we can account for the NP^2, a fire.

4. An accident could happen.


S
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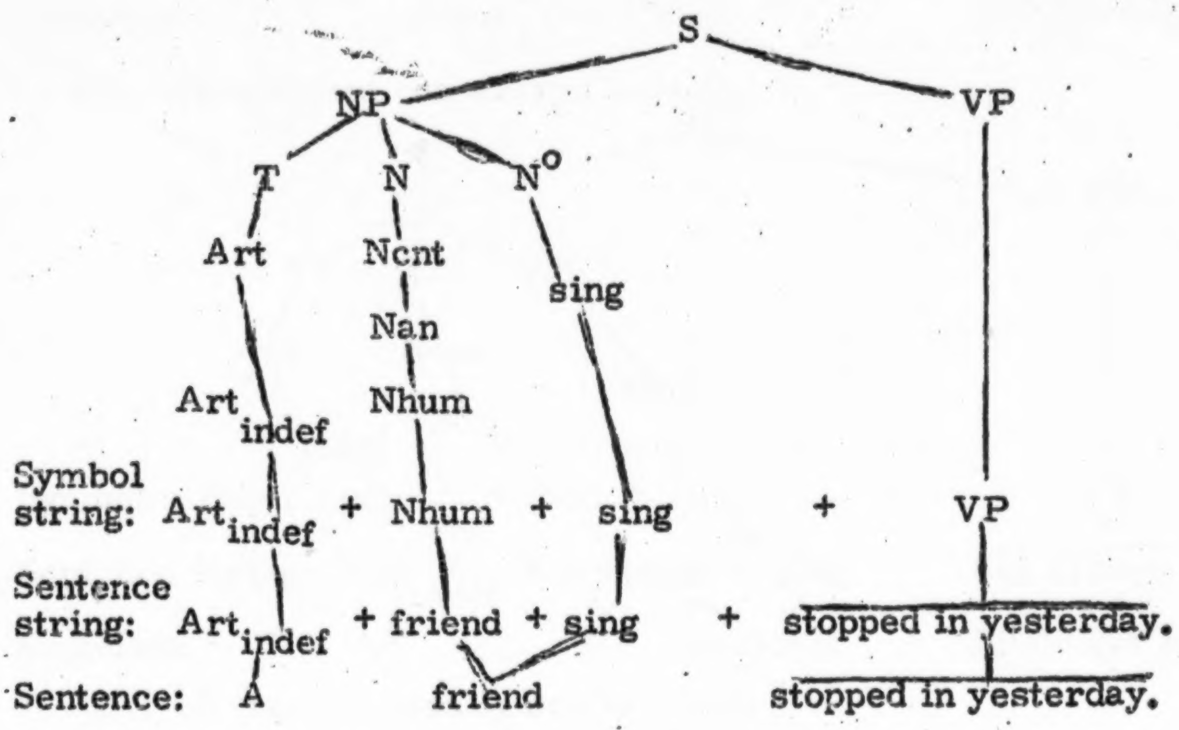
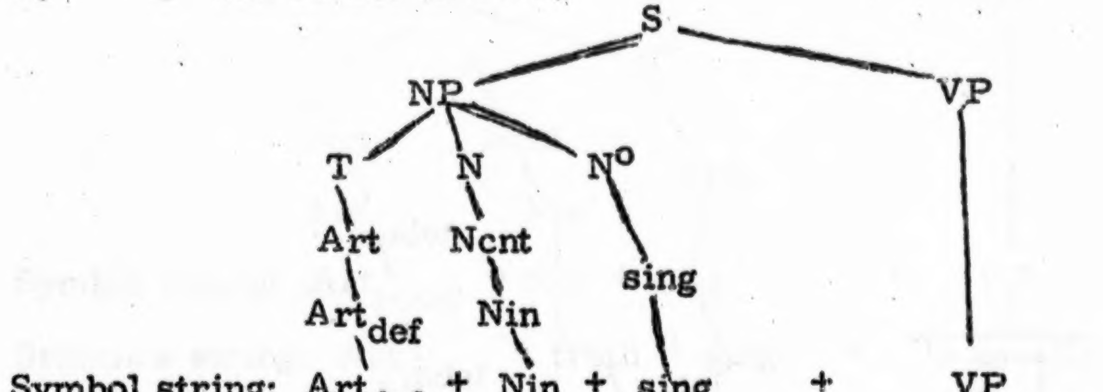
VP
T
N
N°
Art
Ncnt
sing
Art$_{indef}$
Nin
Symbol string: Art$_{indef}$ + Nin + sing + VP
Sentence string: Art$_{indef}$ + accident + sing + could happen.
Sentence: An accident could happen.

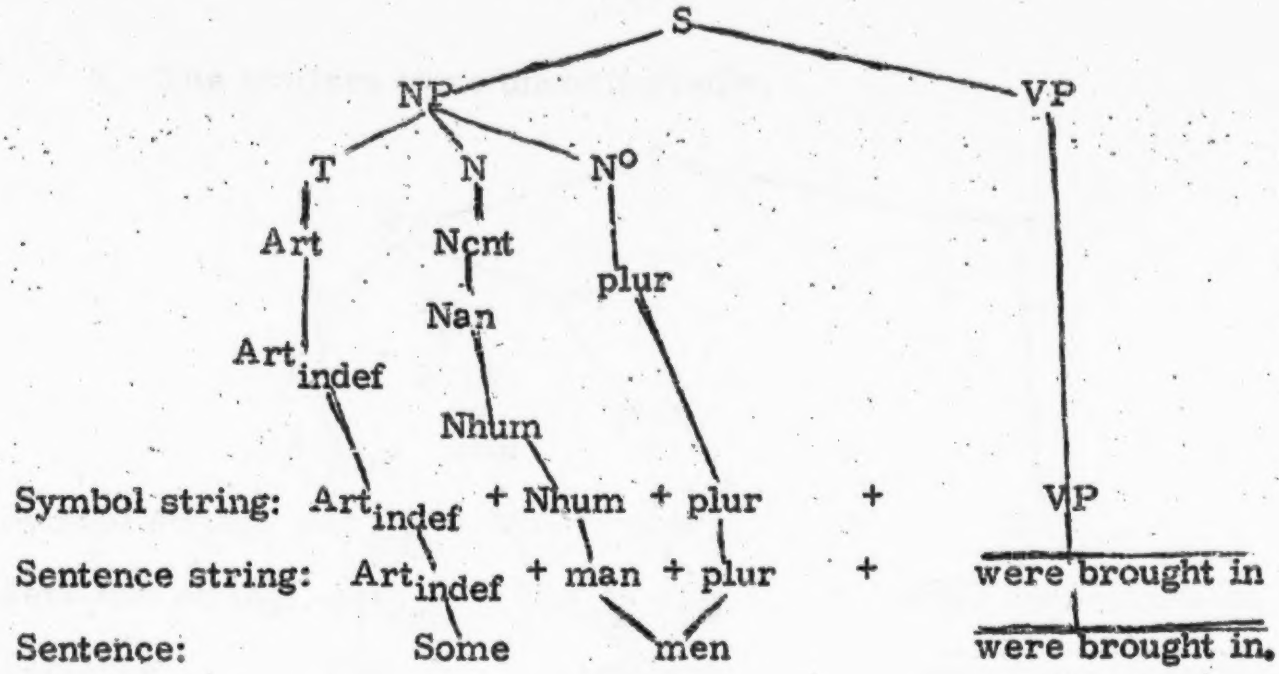
5. A friend stopped in yesterday.


S
NP
VP
T
N
N°
Art
Ncnt
sing
Nan
Art$_{indef}$
Nhum
Symbol string: Art$_{indef}$ + Nhum + sing + VP
Sentence string: Art$_{indef}$ + friend + sing + stopped in yesterday.
Sentence: A friend stopped in yesterday.

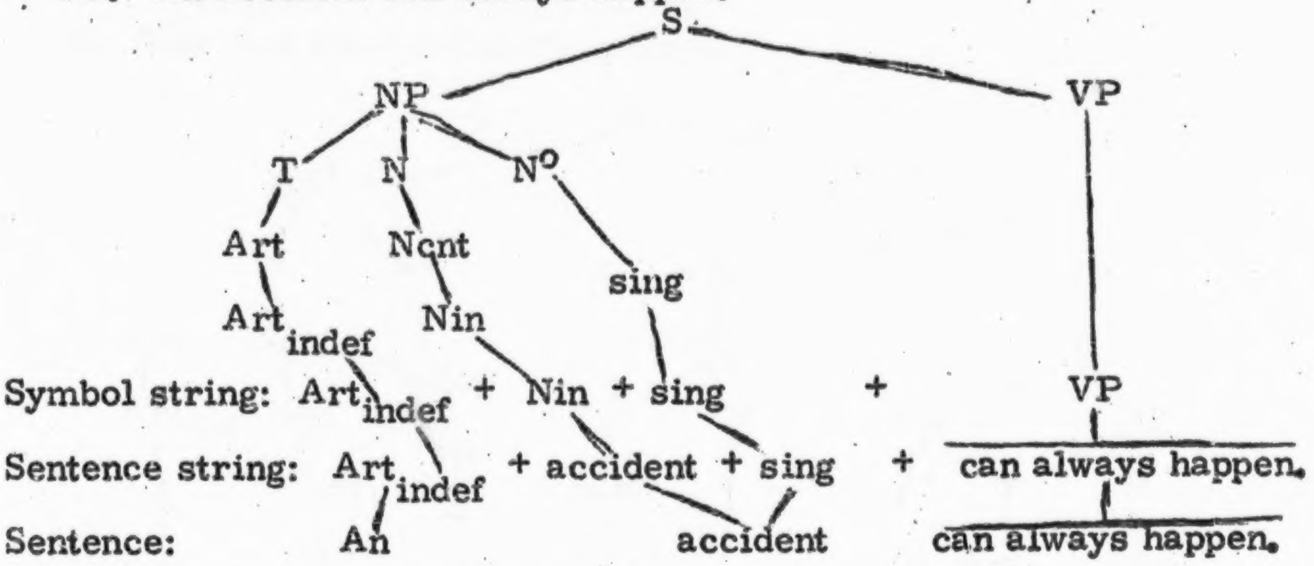
B. 1. The ladder is here.


S
NP
VP
T
N
N°
Art
Ncnt
sing
Art$_{def}$
Nin
Symbol string: Art$_{def}$ + Nin + sing + VP
Sentence string: Art$_{def}$ + ladder + sing + is here
Sentence: The ladder is here.

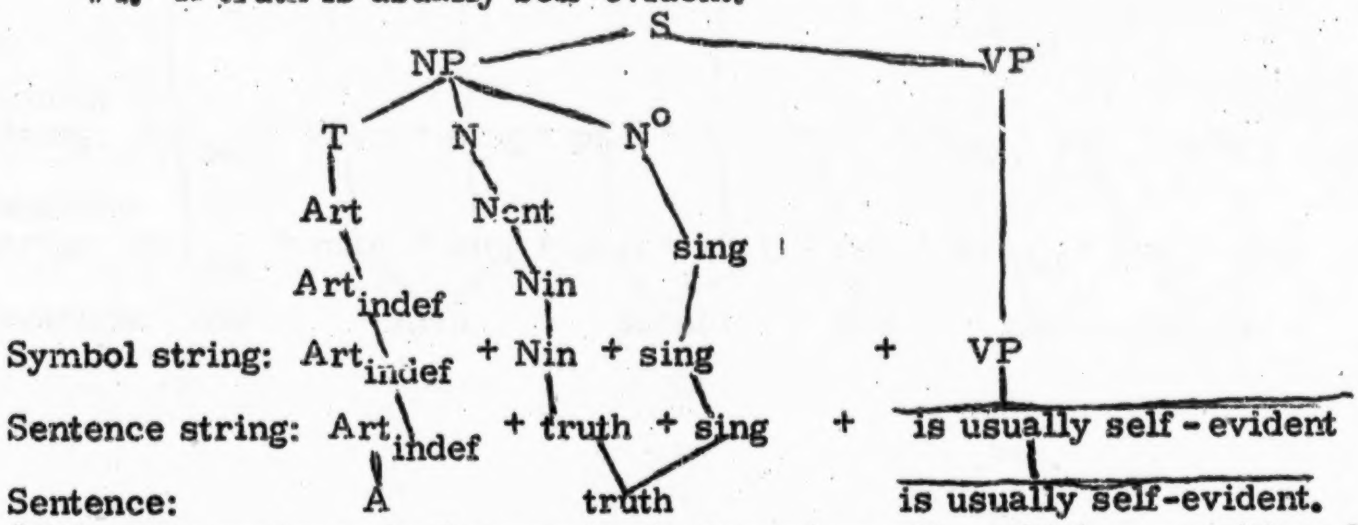
2. Some men were brought in.


S
NP
VP
T
N
N°
Art
Ncnt
plur
Nan
Art indef
Nhum
Symbol string: Art indef + Nhum + plur + VP
Sentence string: Art indef + man + plur + were brought in
Sentence: Some men were brought in.

#3. An accident can always happen.


S
NP
VP
T
N
N°
Art
Ncnt
sing
Art indef
Nin
Symbol string: Art indef + Nin + sing + VP
Sentence string: Art indef + accident + sing + can always happen.
Sentence: An accident can always happen.

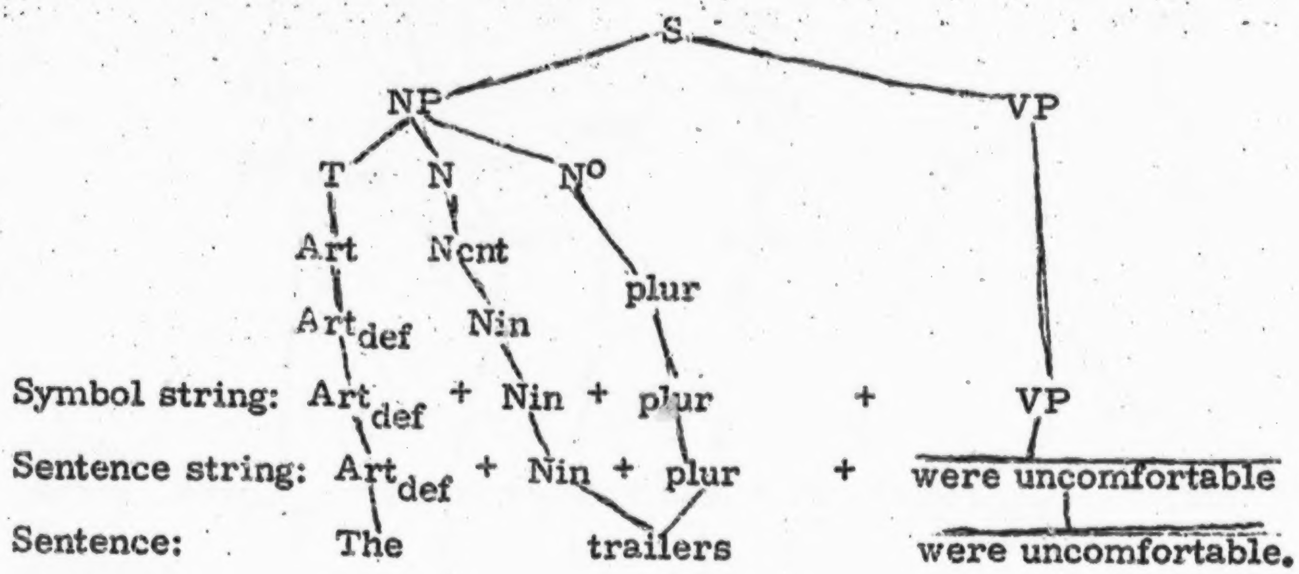
#4. A truth is usually self-evident.


S
NP
VP
T
N
N°
Art
Ncnt
sing
Art indef
Nin
Symbol string: Art indef + Nin + sing + VP
Sentence string: Art indef + truth + sing + is usually self-evident
Sentence: A truth is usually self-evident.

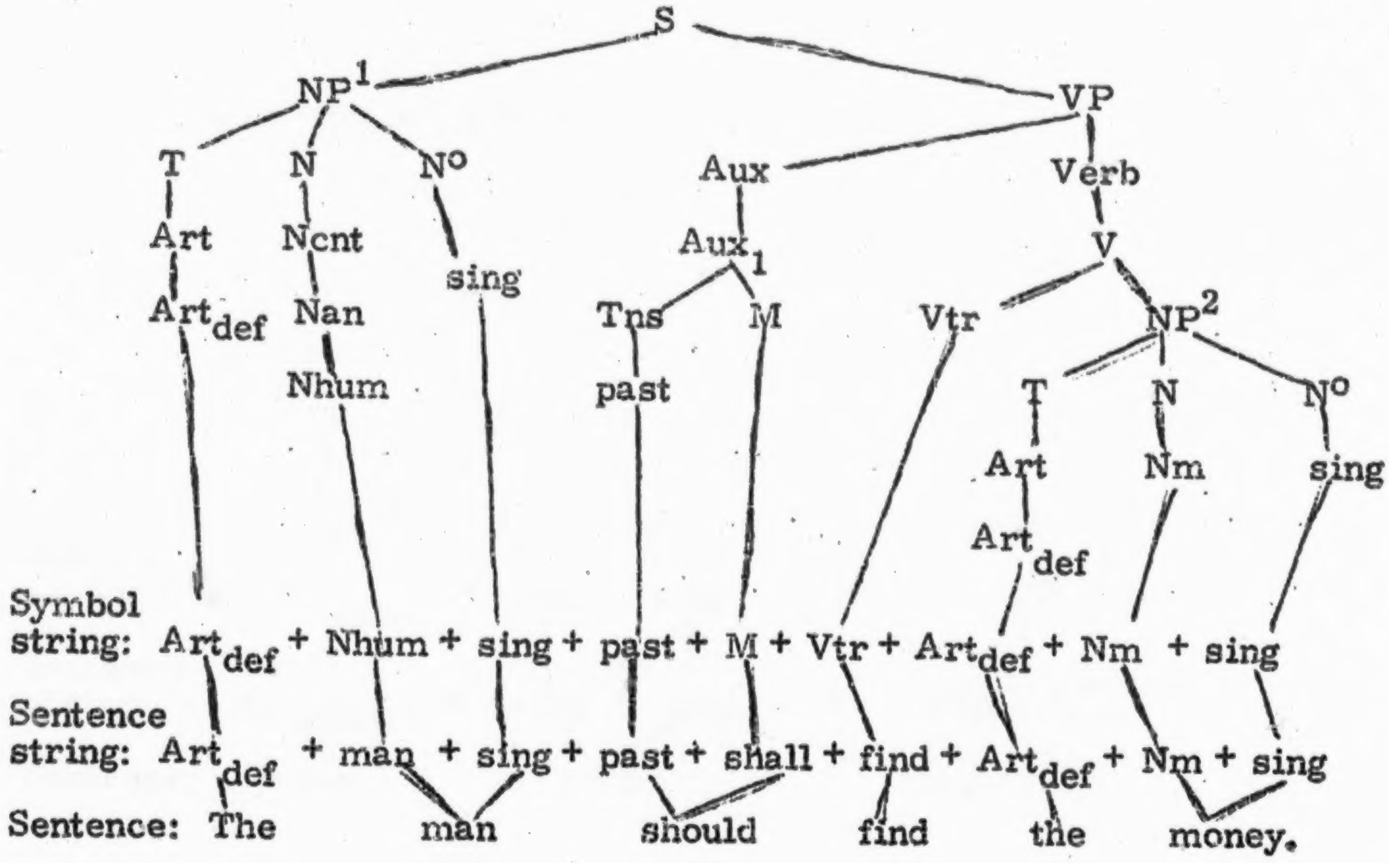
# (3) This sentence is the result of a transformation which re-positioned always between the aux and the verb.

(4) truth can also be classified as Nmass in some sentences. This sentence, like #3, is the result of a transformation which re-positions usually between Be and the adjective Pr.

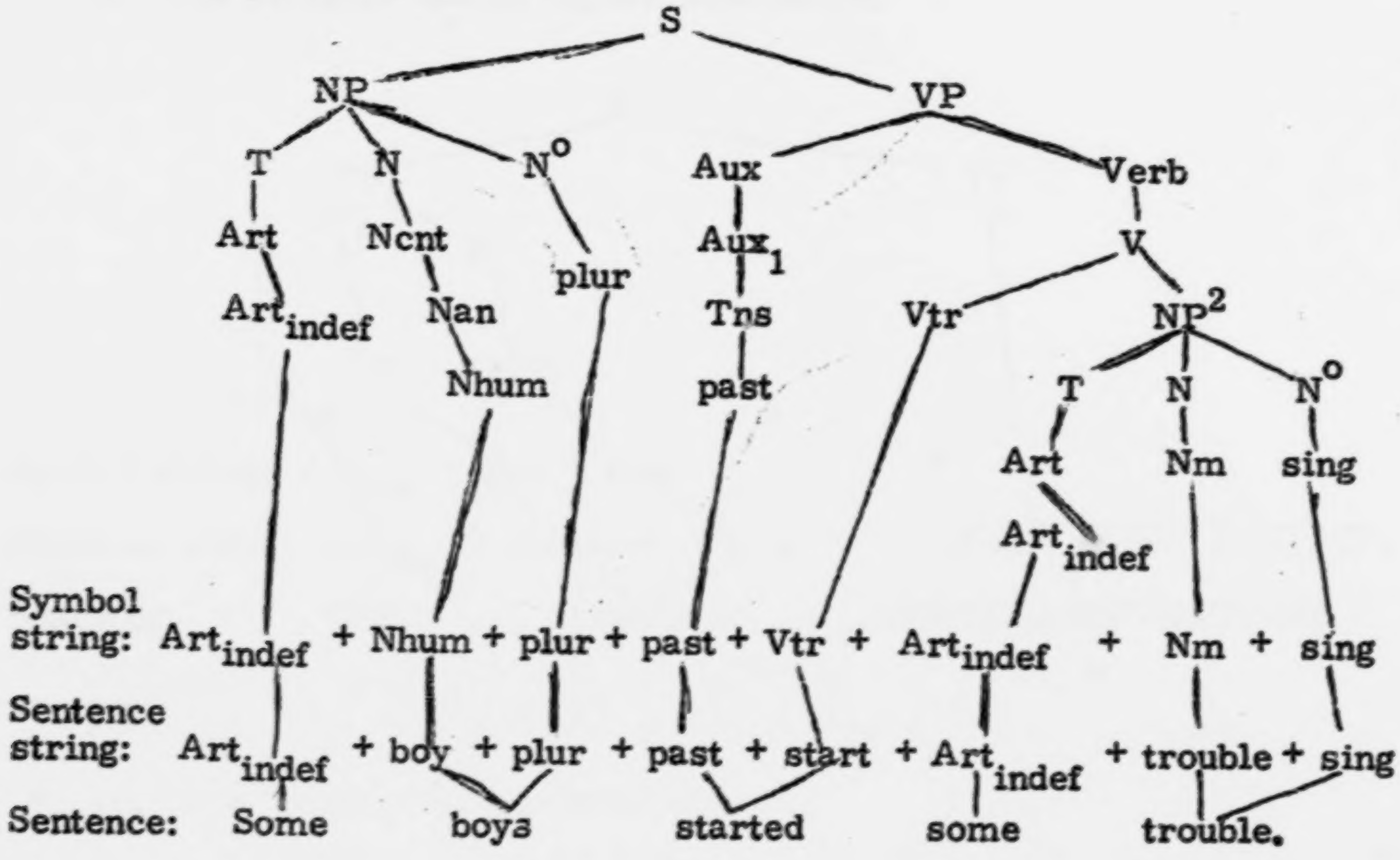
5. The trailers were uncomfortable.


S
NP
VP
T
N
N°
Art
Ncnt
plur
Artdef
Nin
Symbol string: Artdef + Nin + plur + VP
Sentence string: Artdef + Nin + plur + were uncomfortable
Sentence: The trailers were uncomfortable.

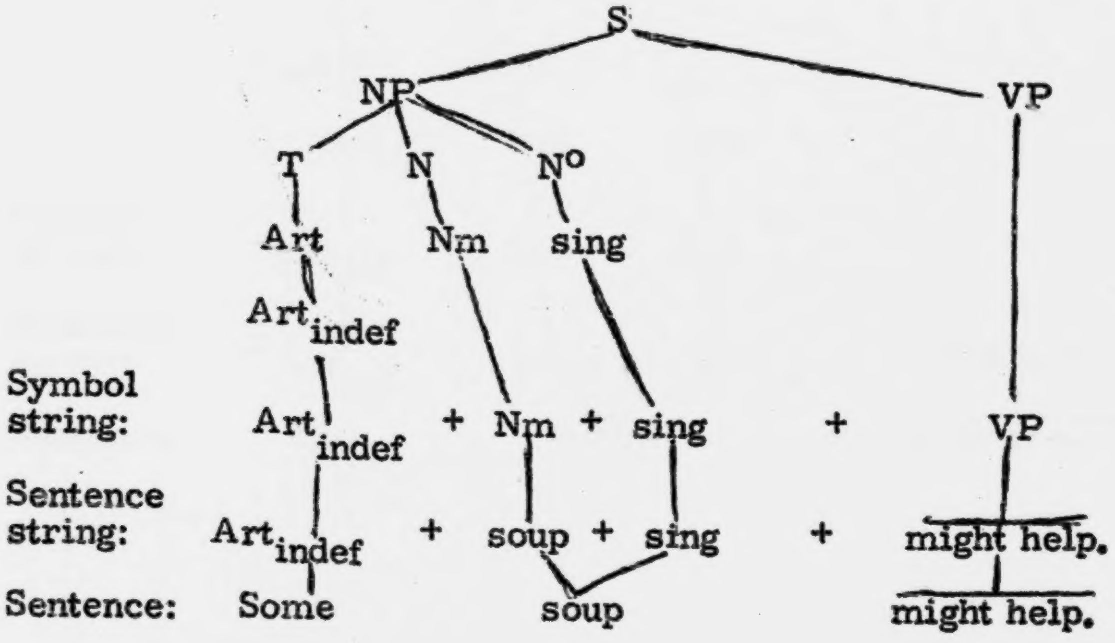
6. The man should find the money.


S
NP1
VP
T
N
N°
Aux
Verb
Art
Ncnt
sing
Aux1
V
Artdef
Nan
Tns
M
Vtr
NP2
Nhum
past
T
N
N°
Art
Nm
sing
Artdef
Symbol string: Artdef + Nhum + sing + past + M + Vtr + Artdef + Nm + sing
Sentence string: Artdef + man + sing + past + shall + find + Artdef + Nm + sing
Sentence: The man should find the money.

#7. Some boys started some trouble.


S
NP
VP
T
N
N°
Aux
Verb
Art
Ncnt
plur
Aux₁
V
Art indef
Nan
Tns
Vtr
NP²
Nhum
past
T
N
N°
Art
Nm
sing
Art indef
Symbol string: Art indef + Nhum + plur + past + Vtr + Art indef + Nm + sing
Sentence string: Art indef + boy + plur + past + start + Art indef + trouble + sing
Sentence: Some boys started some trouble.

8. Some soup might help.


S
NP
VP
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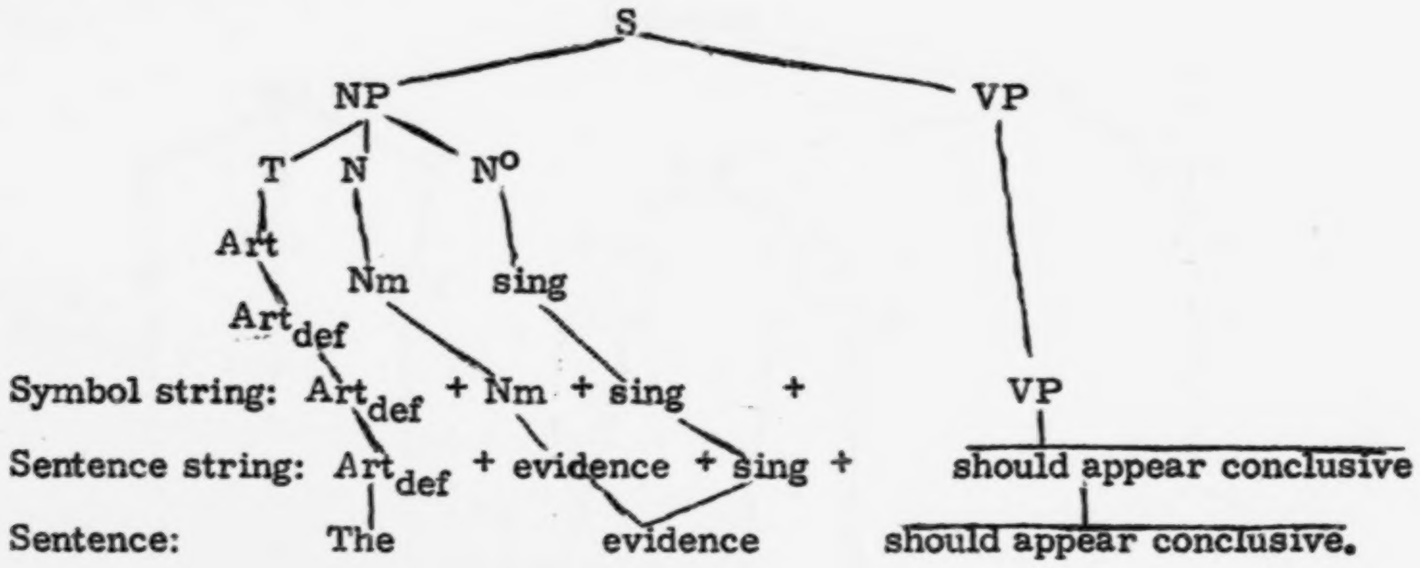
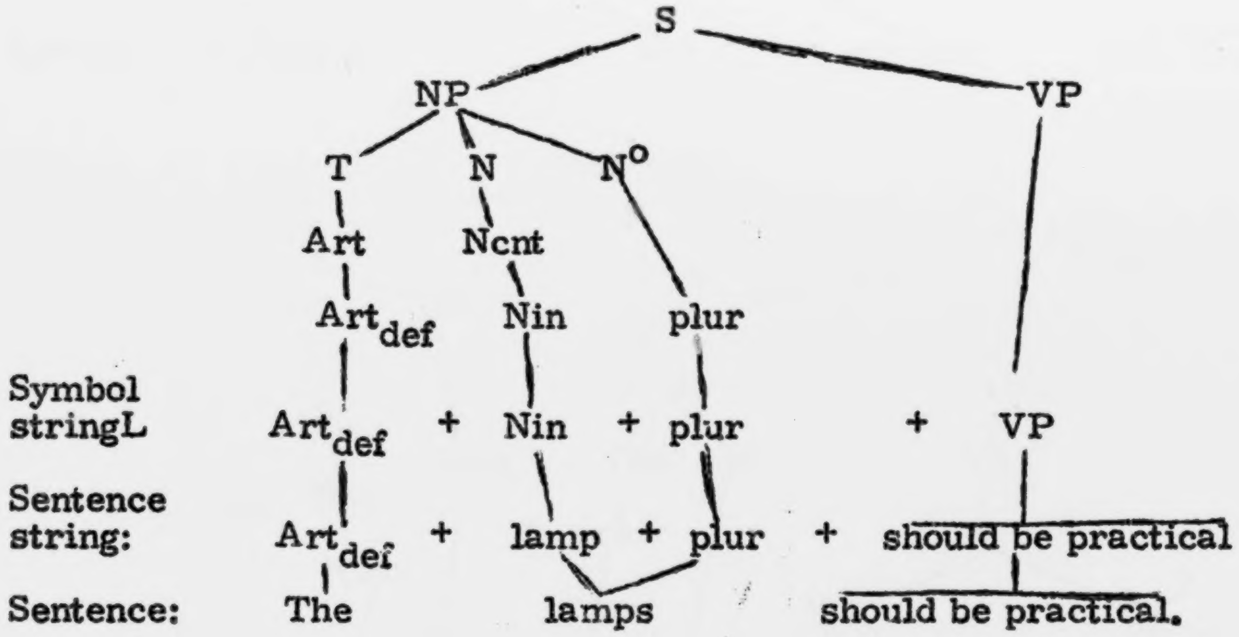
N°
Art
Nm
sing
Art indef
Symbol string: Art indef + Nm + sing + VP
Sentence string: Art indef + soup + sing + might help.
Sentence: Some soup might help.

#trouble can also be classified as Ncnt in some sentences.

9. The evidence should appear conclusive.

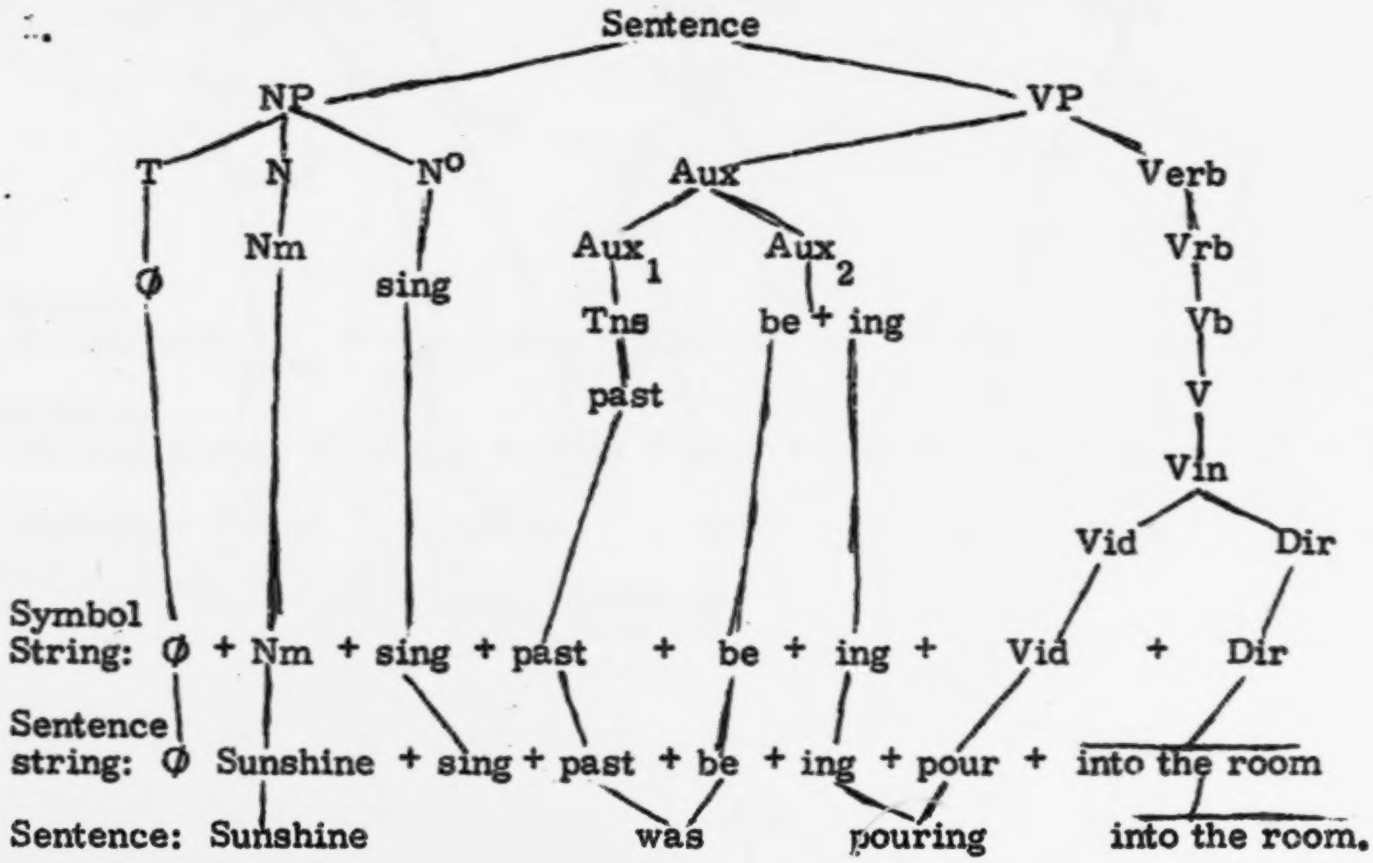

S
NP
VP
T
N
N°
Art
Nm
sing
Art def
Symbol string: Art def + Nm + sing + VP
Sentence string: Art def + evidence + sing + should appear conclusive
Sentence: The evidence should appear conclusive.

10. The lamps should be practical.

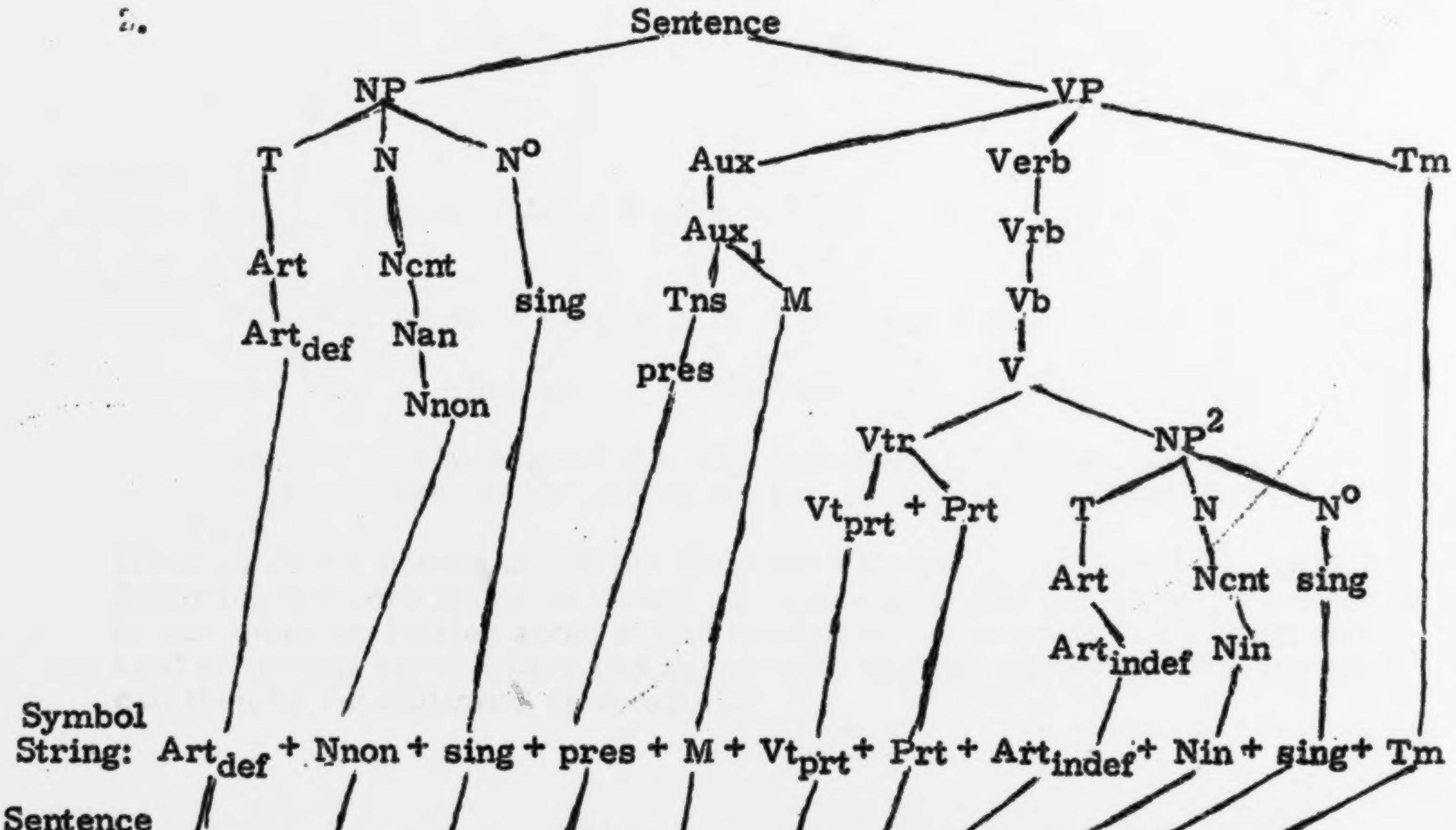

S
NP
VP
T
N
N°
Art
Ncnt
Art def
Nin
plur
Symbol stringL Art def + Nin + plur + VP
Sentence string: Art def + lamp + plur + should be practical
Sentence: The lamps should be practical.

Cumulative Review; Page 40:
(Note: Before assigning this exercise read the note to sentence no. 9 which is found on page 71 of the manual)

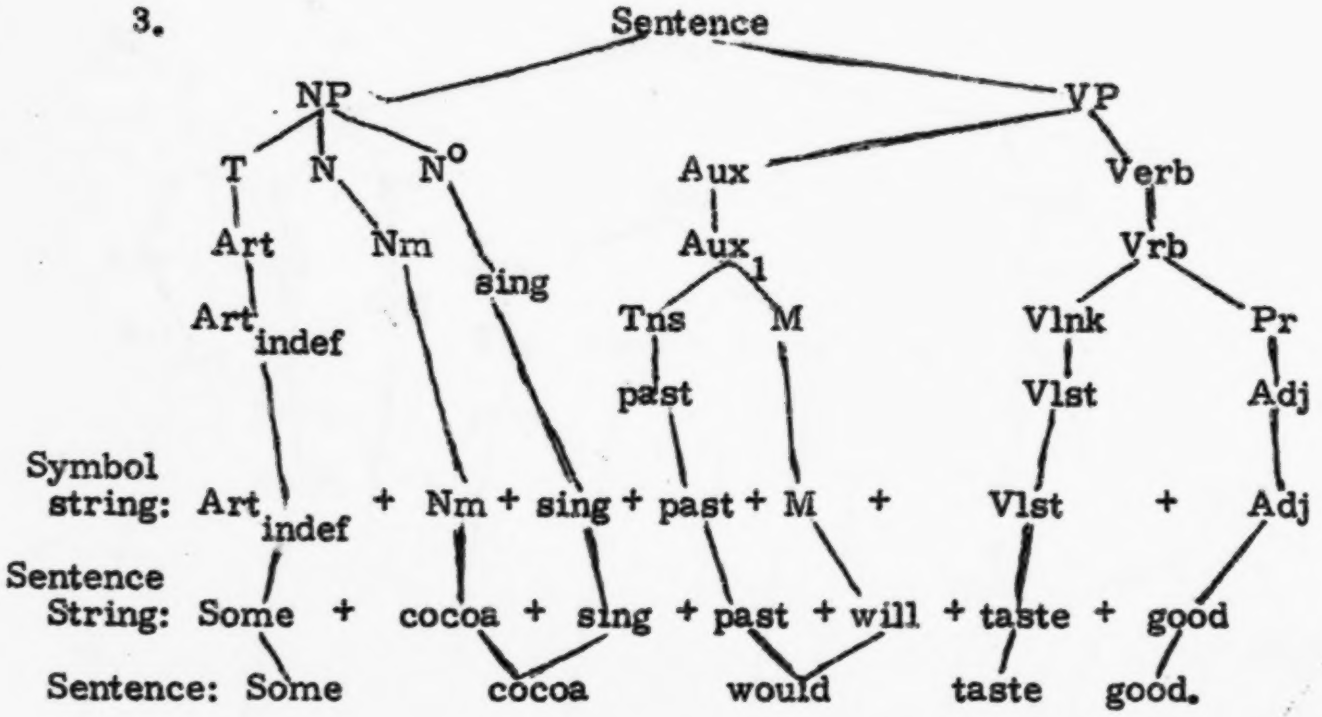
1.


Sentence
NP
VP
T
N
N^o
Aux
Verb
Ø
Nm
sing
Aux_1
Aux_2
Vrb
Tns
be + ing
Vb
past
V
Vin
Vid
Dir
Symbol String: Ø + Nm + sing + past + be + ing + Vid + Dir
Sentence string: Ø Sunshine + sing + past + be + ing + pour + into the room
Sentence: Sunshine was pouring into the room.

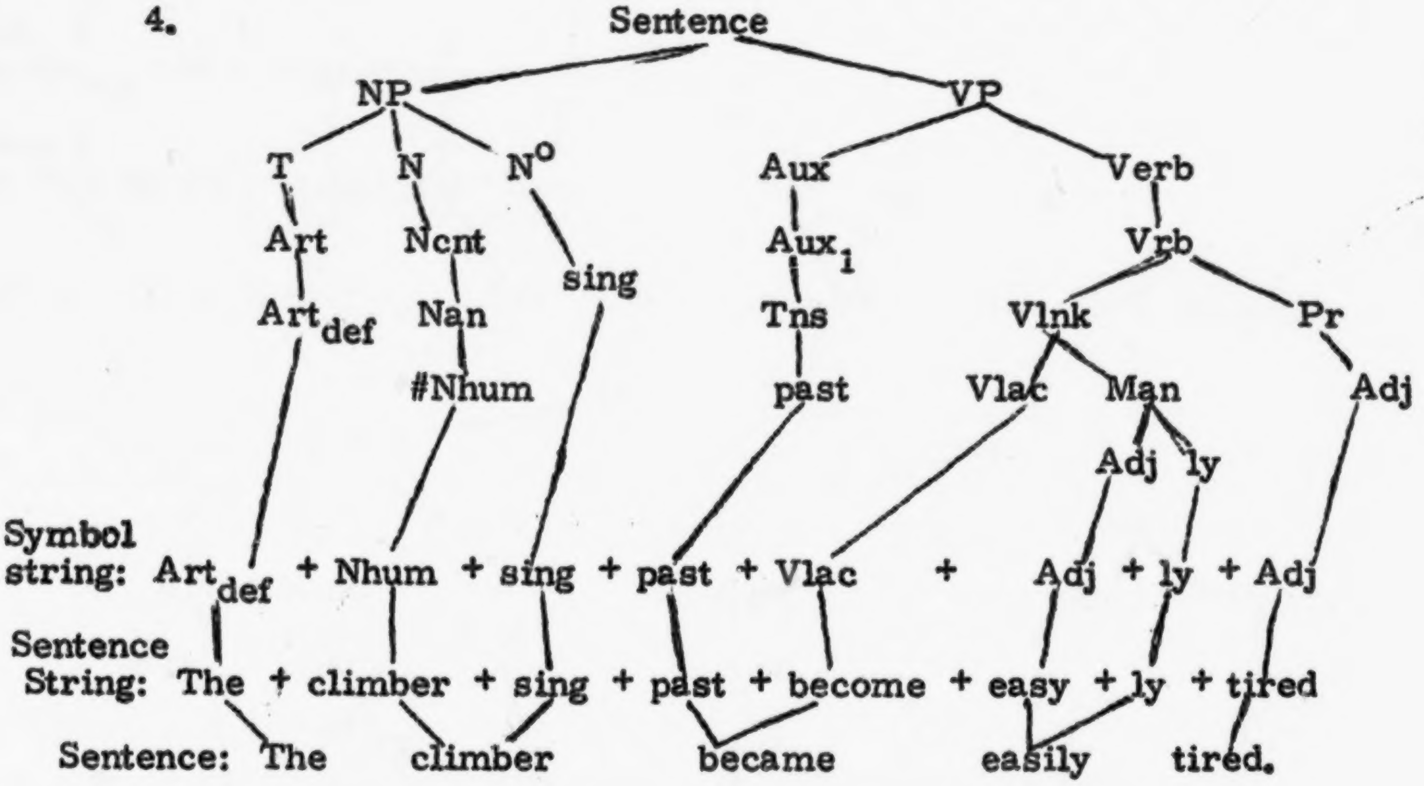
2.


Sentence
NP
VP
T
N
N^o
Aux
Verb
Tm
Art
Ncnt
sing
Aux_1
Vrb
Art_{def}
Nan
Tns
M
Vb
Nnon
pres
V
Vtr
NP^2
Vt_{prt} + Prt
T
N
N^o
Art
Ncnt
sing
Art_{indef}
Nin
Symbol String: Art_{def} + Nnon + sing + pres + M + Vt_{prt} + Prt + Art_{indef} + Nin + sing + Tm
Sentence String: The + class + sing + pres + will + put + on + a + skit + sing + tonight
Sentence: The class will put on a skit tonight.

3.


Sentence
NP
VP
T
N
N°
Aux
Verb
Art
Nm
sing
Aux1
Vrb
Artindef
Tns
M
Vlnk
Pr
past
Vlst
Adj
Symbol string: Artindef + Nm + sing + past + M + Vlst + Adj
Sentence String: Some + cocoa + sing + past + will + taste + good
Sentence: Some cocoa would taste good.

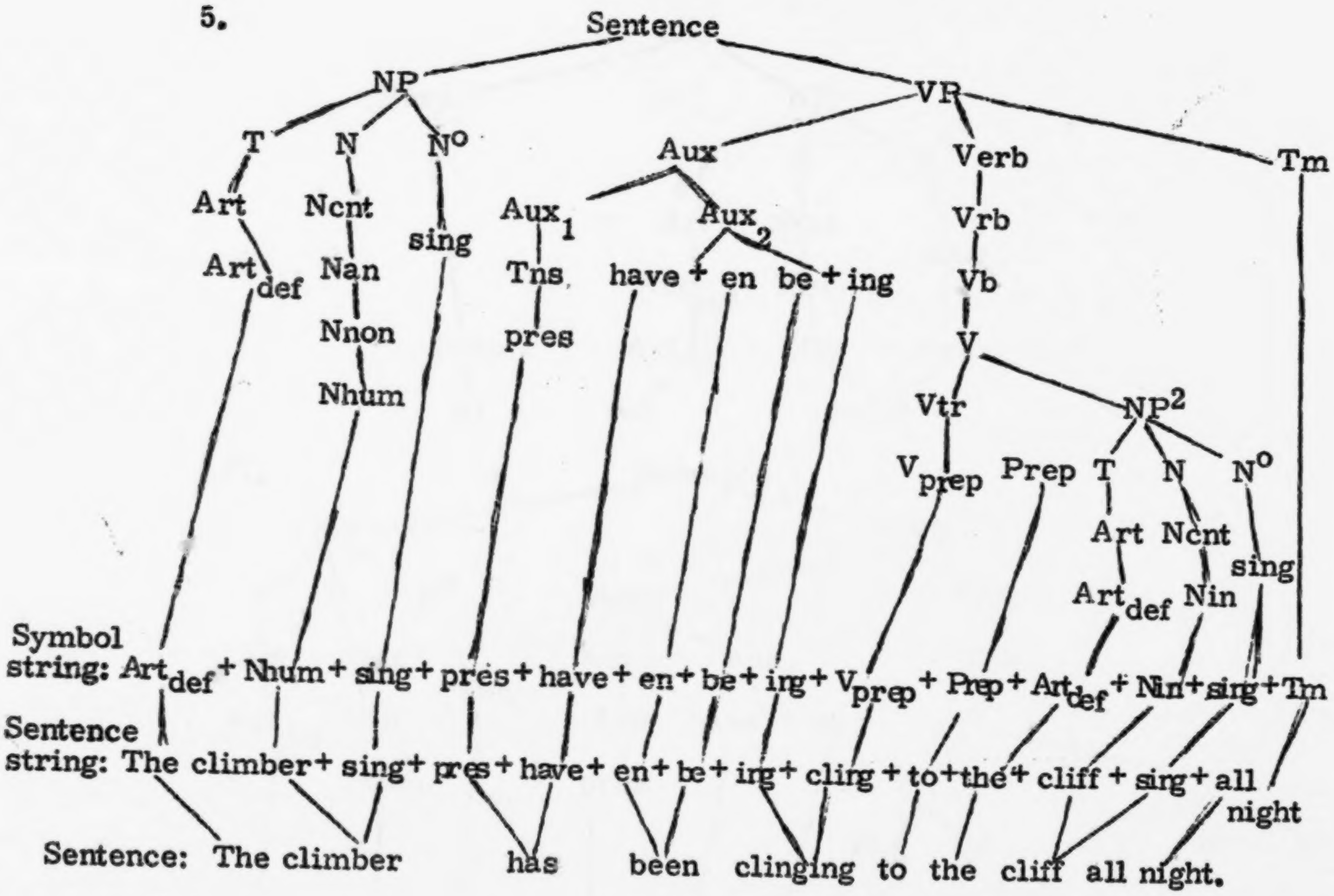
4.


Sentence
NP
VP
T
N
N°
Aux
Verb
Art
Ncnt
sing
Aux1
Vrb
Artdef
Nan
Tns
Vlnk
Pr
#Nhum
past
Vlac
Man
Adj
Adj
ly
Symbol string: Artdef + Nhum + sing + past + Vlac + Adj + ly + Adj
Sentence String: The + climber + sing + past + become + easy + ly + tired
Sentence: The climber became easily tired.

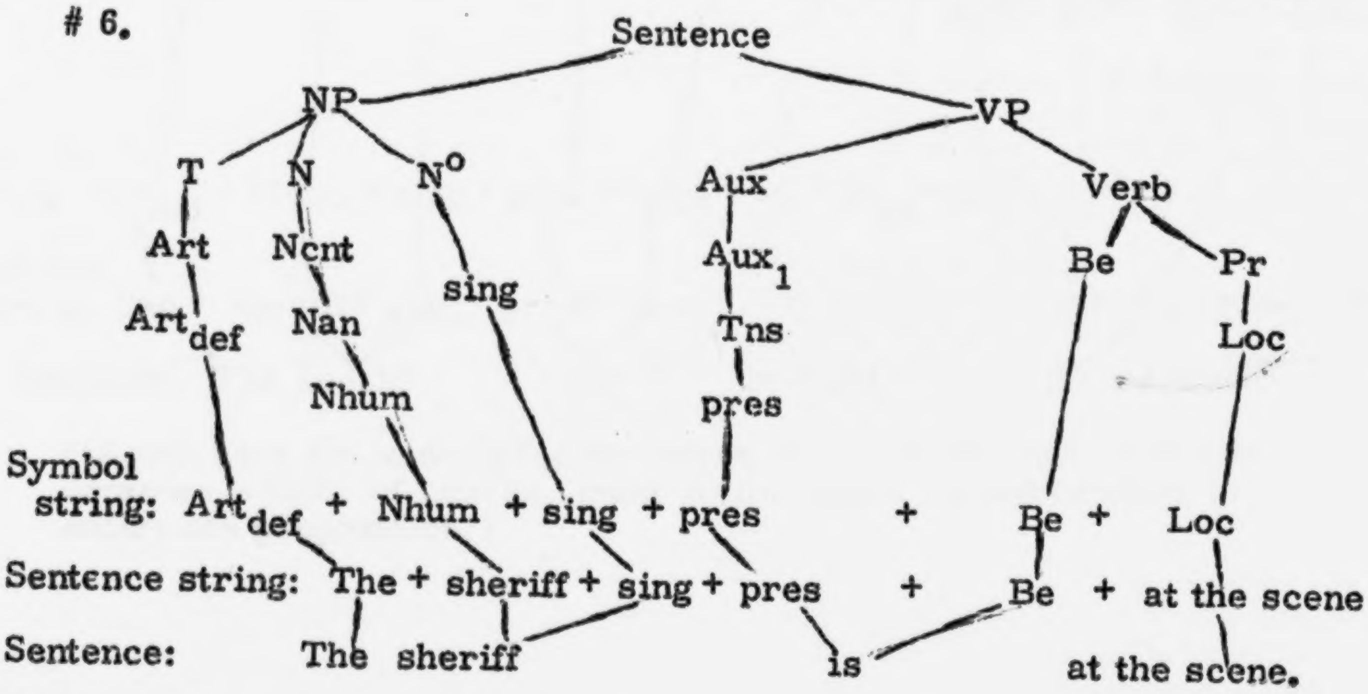
#(Since it can be argued that climber could be either human or non-human you should accept either, or let your students stop at Nan)

(This sentence comes out of the diagram with the manner adverb, easily, following the verb which is where our rules generate it. This corresponds to our intuitive feeling about it and to what we have discovered about the kind of linking verbs which can occur with Manner adverbs. The adverb can then be repositioned optionally).

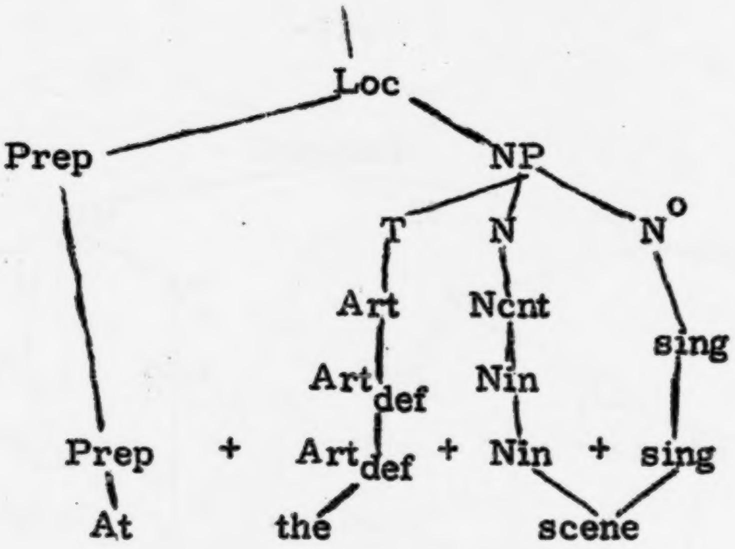
5.


Sentence
NP
VP
T
N
N°
Aux
Verb
Tm
Art
Ncnt
sing
Aux1
Aux2
Vrb
Art def
Nan
Tns
have + en
be + ing
Vb
Nnon
pres
V
Nhum
Vtr
NP2
V prep
Prep
T
N
N°
Art
Ncnt
sing
Art def
Nin
Symbol string: Art def + Nhum + sing + pres + have + en + be + ing + V prep + Prep + Art def + Nin + sing + Tm
Sentence string: The climber + sing + pres + have + en + be + ing + cling + to + the + cliff + sing + all night
Sentence: The climber has been clinging to the cliff all night.

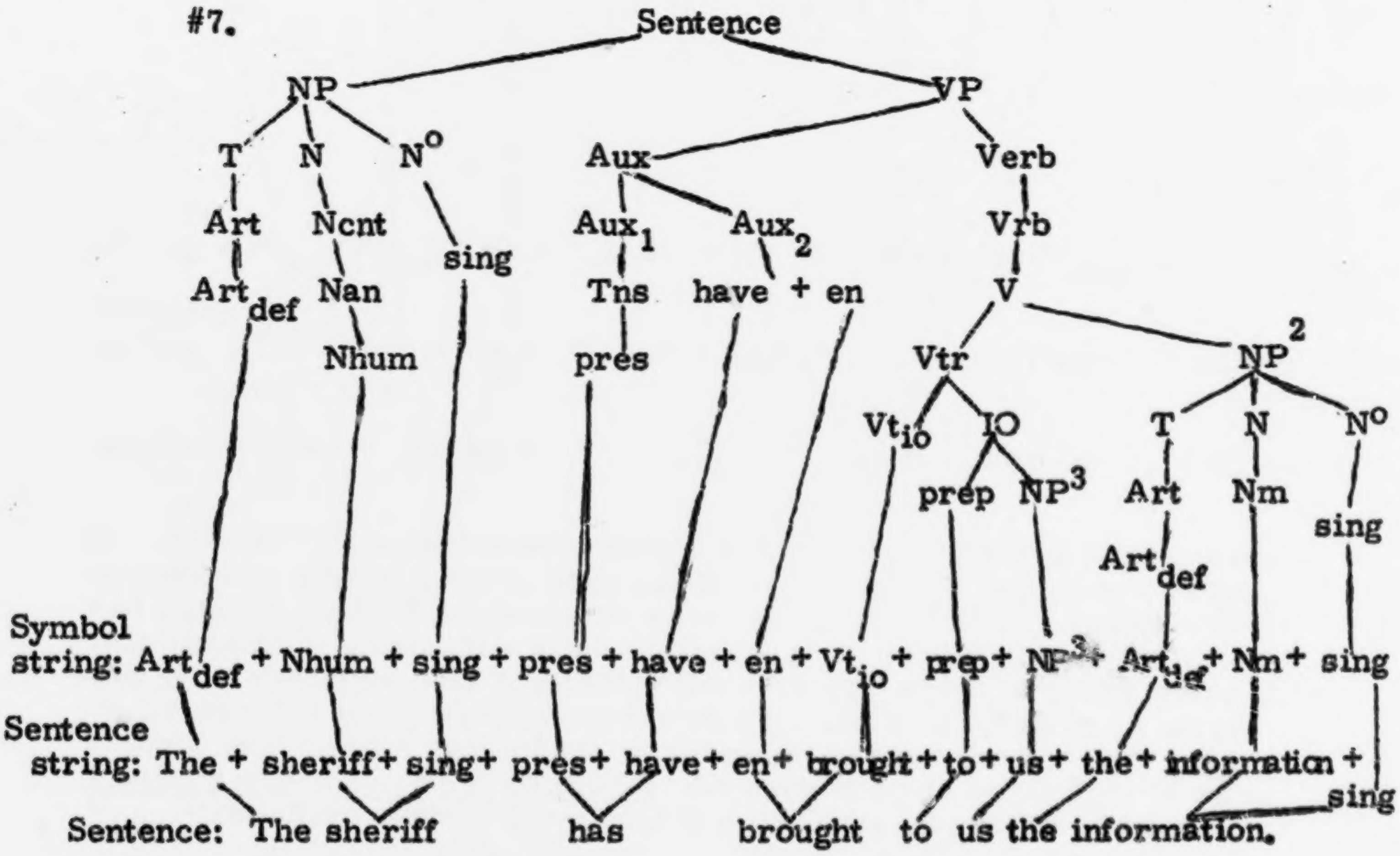
6.


Sentence
NP
VP
T
N
N°
Aux
Verb
Art
Ncnt
sing
Aux1
Be
Pr
Art def
Nan
Tns
Loc
Nhum
pres
Symbol string: Art def + Nhum + sing + pres + Be + Loc
Sentence string: The + sheriff + sing + pres + Be + at the scene
Sentence: The sheriff is at the scene.

#(By this time students will see that some locatives consist of a preposition plus an NP. You may want to let them see if they can add this information to the diagram:

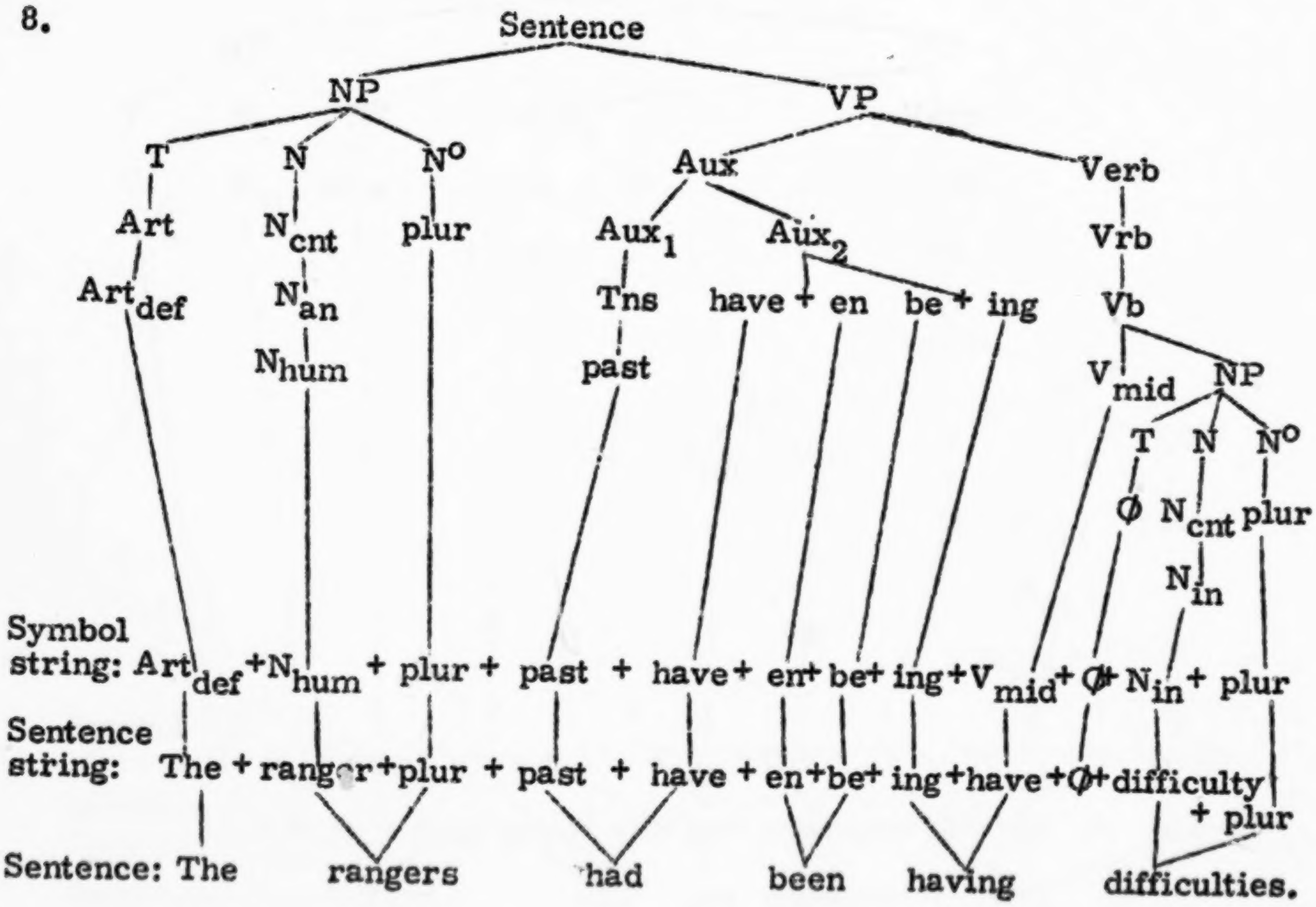


#7.

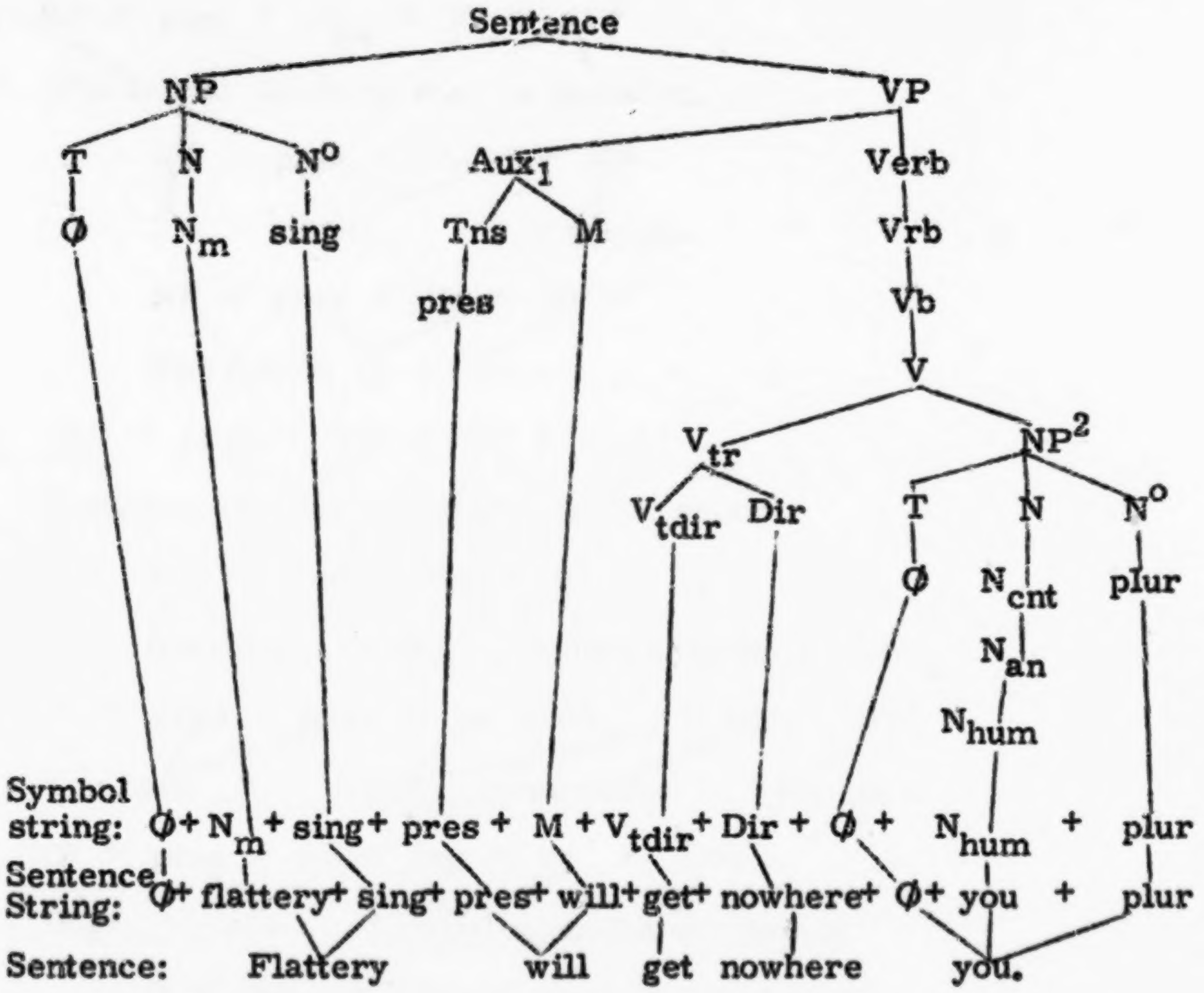

Sentence
NP
VP
T
N
N°
Aux
Verb
Art
Ncnt
sing
Aux1
Aux2
Vrb
Art def
Nan
Tns
have + en
V
Nhum
pres
Vtr
NP2
Vt io
IO
T
N
N°
prep
NP3
Art
Nm
sing
Art def
Symbol string: Art def + Nhum + sing + pres + have + en + Vt io + prep + NP3 + Art def + Nm + sing
Sentence string: The + sheriff + sing + pres + have + en + brought + to + us + the + information + sing
Sentence: The sheriff has brought to us the information.

#(Again here the underlying structure produces an ungrammatical sentence which, of course, must go through a transformation to delete the preposition.)

8.


Sentence
NP
VP
T
N
N°
Aux
Verb
Art
N_{cnt}
plur
Aux_1
Aux_2
Vrb
Art_{def}
N_{an}
Tns
have + en
be + ing
Vb
N_{hum}
past
V_{mid}
NP
T
N
N°
Ø
N_{cnt}
plur
N_{in}
Symbol string: Art_{def} + N_{hum} + plur + past + have + en + be + ing + V_{mid} + Ø + N_{in} + plur
Sentence string: The + ranger + plur + past + have + en + be + ing + have + Ø + difficulty + plur
Sentence: The rangers had been having difficulties.

9. NOTE: This sentence presents some difficulties and you may want to ask your students not to diagram it. However, if you have a bright and curious class it might be interesting to see what they can do with it. It is obviously a sentence in which language is used figuratively which is why it is effective, and it contains the verb get which is at the same time an interesting and a troublesome verb because it is found in so many categories. In this sentence it would seem to have the sense of take. Flattery will take you to no place. As such it could be thought of as a V_{tdir} (transitive verb of direction) and could be diagrammed thus:


Sentence
NP
VP
T
N
N°
Aux1
Verb
Ø
Nm
sing
Tns
M
Vrb
pres
Vb
V
Vtr
NP2
Vtdir
Dir
T
N
N°
Ø
Ncnt
plur
Nan
Nhum
Symbol string: Ø + Nm + sing + pres + M + Vtdir + Dir + Ø + Nhum + plur
Sentence String: Ø + flattery + sing + pres + will + get + nowhere + Ø + you + plur
Sentence: Flattery will get nowhere you.

(Of course a transformation is necessary to reposition nowhere.)

B. page 40:
(Allow your students to use NP instead of the detailed derivation.)

1. $NP + pres + have + en + be + ing + V_{in} + Loc$

Someone has been sleeping ~~In the bed.~~

$NP + pres + V_{mid} + NP$

I have a bed.

2. $NP + pres + be + ing + V_{tr} + Art_{def} + NP^2 + Tm$

Jerry is taking the math this year.

$NP + pres + Be + Adj$

The math is new.

3. NP + past + Vt_{io} + IO + NP^2
The friend asked of me a question.

NP + pres + Vmid + NP
I have a friend.

NP + pres + Be + NP
The friend is a cop.

4. NP + pres + Vtr + NP + Loc
Someone requires math in our school

NP + pres + Vtr + NP + Loc
Someone requires science in our school.

5. NP + pres + have + en + Vt_{dir} + Dir + NP^2
You have put somewhere the keys.

6. NP + pres + be + ing + Vi + Loc
Bugs are crawling in the woodwork.

Ø + Nnon + plur + pres + Be + Adj
Bugs are black.

7. NP + pres + have + en + Vtr + NP + Tm
Someone has painted the car recently.

NP + pres + Be + Loc
The car is on the street.

8. NP + pres + have + en + Vtr + NP^2
We have called the police

NP + pres + have + en + Vtr + NP^2
We have received the permission.

NP + pres + Vmid + NP
They have the permission.

9. $NP + pres + Vt_{prep} + Prep + NP^2$
The racket belongs to the roommate.

$NP + pres + Vmid + NP$
He has a roommate.

$NP + pres + Vmid + NP$
Bill has a racket.

10. $NP + pres + be + ing + Vin + Loc$
The costumes are hanging in the closet.

$NP + pres + Be + Adj$
The costumes are old.

$NP + pres + Vmid + NP$
Mary has a closet.

C. Page 40-41:

1. Someone has been sleeping in the bed
I have a bed. } ⟹

Someone has been sleeping in the bed which I have ⟹

Someone has been sleeping in the bed I have ⟹

Someone has been sleeping in my bed. ⟹

Has someone been sleeping in my bed? ⟹

Who has been sleeping in my bed?

2. Jerry is taking the math this year
The math is new } ⟹

Jerry has been taking the math which is new this year. ⟹

Jerry has been taking the math new this year. ⟹

Jerry has been taking the new math this year.

3. The friend asked of me a question
I have a friend
The friend is the cop } ⟹

The friend whom I have asked of me a question ⇒

The friend I have asked of me a question ⇒

My friend asked of me a question ⇒

My friend who is the cop asked of me a question ⇒

My friend the cop asked of me a question. ⇒

My friend the cop asked me a question.

4. Someone requires math in our school
Someone requires science in our school } ⇒

Someone requires math and science in our school. ⇒

Math and science are required by someone in our school ⇒

Math and science are required in our school.

5. You have put somewhere the keys. ⇒

You have put the keys somewhere. ⇒

Have you put the keys somewhere? ⇒

Where have you put the keys?

6. Bugs are crawling in the woodwork
Bugs are black } ⇒

Bugs which are black are crawling in the woodwork ⇒

*Bugs black are crawling in the woodwork ⇒

Black bugs are crawling in the woodwork.

7. Someone has painted the car recently
The car is on the street. } ⇒

Someone has painted the car which is on the street recently. ⇒

Someone has painted the car on the street recently. ⇒

The car on the street has been painted by someone recently ⇒

The car on the street has been painted recently.

8. We have called the police
We have received the permission
They have the permission } ⇒

We have called the police and received the permission. ⟹

We have called the police and received the permission which they have. ⟹

We have called the police and received the permission they have ⟹

We have called the police and received their permission.

9. $$\left.\begin{array}{l}\text{The racket belongs to the roommate}\\ \text{Bill has a racket}\\ \text{He has a roommate}\end{array}\right\} \Longrightarrow$$

The racket which Bill has belongs to the roommate. ⟹

The racket Bill has belongs to the roommate. ⟹

Bill's racket belongs to the roommate. ⟹

Bill's racket belongs to the roommate which he has. ⟹

Bill's racket belongs to the roommate he has. ⟹

Bill's racket belongs to his roommate.

10. $$\left.\begin{array}{l}\text{The costumes are hanging in the closet}\\ \text{The costumes are old}\\ \text{Mary has a closet}\end{array}\right\} \Longrightarrow$$

The costumes which are old are hanging in the closet. ⟹

*The costumes old are hanging in the closet. ⟹

The old costumes are hanging in the closet. ⟹

The old costumes are hanging in the closet which Mary has. ⟹

The old costumes are hanging in the closet Mary has. ⟹

The old costumes are hanging in Mary's closet.

MORE ABOUT QUESTIONS

Special for the teacher:

The following discussion of the question transformation may be of interest to you as background material. It is the theory underlying yes-or-no questions, and points up the relation between all questions, but most of this theory we have not gone into in the student version.

There is a basic similarity between noun clauses beginning with wh words (when, where, how, whether, etc.) and questions.

(1) Tell me where he is : Where is he?
(2) Tell me when it will be : When will it be?
(3) Tell me how it should be done. : How should it be done?
(4) Tell me who he is : Who is he?
and (5) Tell me whether he should do it. : Should he do it?

Examples 1 - 4 are perfectly straight-forward. The only differance between the noun clause and the question is the inversion of the VP (or part of it) and the NP. If example 5 were exactly parallel with 1 - 4 the question should be *Whether should he do it? In an older stage of English that is exactly what it was. However, in modern English the whether is obligatorily deleted in the question, even though it appears in the corresponding noun clause.

Notice that the inversion of the VP, or part of it, is meaningful. It means about the same as the phrase Tell me . . . . The inversion is accomplished in the following way:

The car is here. ⟹ Is the car here?
The boy will catch the dog. ⟹ Will the boy catch the dog?
The dog has eaten the bone. ⟹ Has the dog eaten the bone?
The boy is going to school. ⟹ Is the boy going to school?
A cat ran under the house. ⟹ Did a cat run under the house?

Notice that in the middle three, tense and the auxiliaries M, have, and be, invert with NP. In 1, the verb Be inverted. In 5 it was necessary to add do because neither M, have, or be occurred in the sentence.

It is significant that not all base declaratives can become questions, and that some things which are ungrammatical as declaratives can become questions. For instance, there is no declarative for

Does he ever go?

and there is no question for

He hardly moves.

It is therefore desirable to include something in the kernel or base sentence to indicate that the sentence must become a question in order to be grammatical. In other words there must be something to make the transformation obligatory. This is simply accomplished by including an optional symbol Q in the first rule. At that point a choice is made as to whether the sentence will become interrogative or not. This allows us to generate all questions in the simplest way, even those with no grammatical declaratives.

To return to the earlier examples, the question in 1 can be answered by

He is here.
He is there.
He is somewhere.
Etc.

Answers to 5 are much like those in 1 - 4 but somewhat different as well. They could be

Yes, he should do it.
No, he shouldn't do it.

or simply

Yes.
No.

Such questions as 5 have come to be called Yes-or-No questions. The relation of answers like Yes, he should and No, he shouldn't to Either he should do it or he shouldn't is clear.

Either he should do it or he shouldn't do it; tell me which.

is a paraphrase of

Tell me whether he should do it.

or of Tell me whether he should do it or he shouldn't do it.

This indicates that a sentence like

Either he should do it or he shouldn't do it.

is used as the source of the object noun clause in

Tell me whether he should do it or he shouldn't do it.

wh-either ⟹ whether

Deleting from this sentence will result in

Tell me whether he should do it or not. ⟹
Tell me whether he should do it.

These last two are paraphrases of each other. The yes-or-no question, then, is derived from

Q + either he should do it or he shouldn't do it.

The Q, as it does with other questions, causes inversion of all or part of the VP with the NP in each clause. The *whether* is deleted except in the embedding.

Whether should he do it or shouldn't he do it. ⟹

Should he do it or shouldn't he do it?

The *or* and the material following it may be deleted entirely, or deleted from, to yield *or not*, or *or shouldn't he*.

This explanation indicates that the generation of all questions involves wh--. The generation of each question is parallel to that of its related noun clause, except for the inversion in all questions and the deletion of *whether* in the yes-or-no question. Relating these sentences will materially increase the generality of the rules.

* * * *

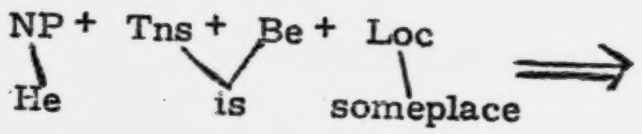
The student version begins with a general review of the transformations which lead to questions. These were first introduced in *Language II.* The above justification for considering all questions related to the yes-or-no is not included, but the steps in the transformation are developed, and the desirability for the *Q* in the kernel is explained.

In the earlier unit on the question, the subject question (*Who* is going?) was developed in an optional section at the very end; and the suggestion was made that for some classes the material might very well wait for another year. Therefore, you should ascertain whether your students have had that material. If not, you will want to spend more time on the earlier parts of this unit and may even want to draw on some of the material in Language II.

The questions with *when*, *where*, *how*, *who*, etc., involve the notion of wh-attachment. When a sentence contains *Q*, one of its constituents may have *wh* attached to it, and the constituent then becomes a question word. Thus

wh-Loc ⟹ where
wh-Tm ⟹ when
wh-NP$_{hum}$ ⟹ who(m)
and wh-either ⟹ whether (see above)

But this attachment leaves the question words out of place. For instance when the sentence



has been transformed and had *wh* attached to the *Loc* it becomes

Tns + Be + NP + wh-Loc
*Is he where?

A transformation (symbolized as T_{wh}) then is required to move the structure with wh to the front of the sentence.

Tns + Be + NP + wh-Loc ⟹ wh-Loc + Tns + Be + NP
*Is he where Where is he?

Notice that this happens also in the embedded noun clauses of 1 - 5.

The students' unit procedes rather slowly over all of this material, and each step in the transformation is developed. There are many exercises, not all of which you may want to use. The important thing in each is to help the student understand the underlying structure and the basic relation between the various questions.

Though you will probably not wish to discuss it, we hope that the introductory explanatory material in this manual has added to your background understanding of the wider relationship with noun clauses.

There are additional explanatory notes included in the following answers to exercises on points that seem to need further explication.

Exercise p. 45: This exercise constitutes a brief review of the steps leading to the question transformation. It is designed to help the student recall, more or less by himself, the various elements involved.

A. 1. Q + NP + pres + M + Vid + Dir + Tm $\xrightarrow{T_Q}$
The birds will fly north soon.

*(Q) pres + M + NP + Vid + Dir + Tm
Will the birds fly north soon?

(# The Q may be dropped from the string after it has gone through T_Q. If it does remain it is the symbol that indicates that the sentence should be pronounced as a question with rising inflection, etc. Do as you like about it.)

2. Q + NP + pres + M + Vtr + NP + Tm $\xrightarrow{T_Q}$
I can give the report today.

(Q) pres + M + NP + Vtr + NP + Tm
Can I give the report today?

3. Q + NP + pres + M + Vtr + NP $\xrightarrow{T_Q}$
The boy should lock the bicycle.

(Q) pres + M + NP + Vtr + NP
Should the boy lock the bicycle?

4. Q + NP + pres + M + Vtr + NP $\xrightarrow{T_Q}$
I must pass the exam.

(Q) pres + M + NP + Vtr + NP
Must I pass the exam?

5. Q + NP + past + M + Vi $\xrightarrow{T_Q}$
They would forget.

(Q) past + M + NP + Vi
Would they forget?

B\. 1. Q + NP + pres + have + en + Vtr + NP $\xrightarrow{T_Q}$
Terry has given blood.

(Q) pres + have + NP + en + Vtr + NP
Has Terry given blood?

2. Q + NP + pres + have + en + Vtr + NP + Man $\xrightarrow{T_Q}$
The chimps have learned a language quickly.

(Q) pres + have + NP + en + Vtr + NP + Man
Have the chimps learned a language quickly?

3. Q + NP + pres + have + en + Vi + Loc $\xrightarrow{T_Q}$
The plane has landed in the driveway.

(Q) pres + have + NP + en + Vi + Loc
Has the plane landed in the driveway?

4. Q + NP + pres + have + en + Vtr + NP + Loc $\xRightarrow{T_Q}$
Some people have built shelters in basements.

(Q) present + have + NP + en + Vtr + NP + Loc
Have some people built shelters in basements?

5. Q + NP + past + have + en + Be + Adj $\xRightarrow{T_Q}$
The superintendent had been ill.

(Q) past + have + NP + en + Be + Adj.
Had the superintendent been ill?

C. 1. Q + NP + pres + be + ing + Vtr + NP $\xRightarrow{T_Q}$
The fish is dodging the hook.

(Q) pres + be + NP + ing + Vtr + NP
Is the fish dodging the hook?

2. Q + NP + past + Be + NP $\xRightarrow{T_Q}$
Fred was a girl.

(Q) past + Be + NP + NP
Was Fred a girl?

3. Q + NP + past + be + ing + Vi + Loc $\xRightarrow{T_Q}$
The children were walking in the cement.

(Q) past + be + NP + ing + Vi + Loc
Were the children walking in the cement?

4. Q + NP + pres + be + ing + Vi + X $\xRightarrow{T_Q}$
I am going with you.

(Q) pres + be + NP + ing + Vi + X
Am I going with you?

(This sentence may present a problem. At least with you should provide some discussion. To some it may seem like a manner adverb. We can mark it X to show we haven't analyzed it yet. This might be a good time to set your students to thinking about manner adverbs and possible subclasses. All of the answers are not now available, but you should remember that in asking questions about such constructions we are going much farther than previous grammars have gone.)

5. Q + NP + pres + be + ing + Vid + Dir $\xRightarrow{T_Q}$

They are flying to Hawaii.

(Q) pres + be + NP + ing + Vid + Dir

Are they flying to Hawaii?

D. 1. Q + NP + past + Vtr + NP $\xRightarrow{T_Q}$

Earwigs ate the shrubbery.

(Q) past + do + NP + Vtr + NP

Did earwigs eat the shrubbery?

#2. Q + NP + past + Vid + Dir $\xRightarrow{T_Q}$

A leprechaun came out of the hole.

(Q) past + do + NP + Vid + Dir

Did the leprechaun come out of the hole?

*(This is a kind of directional adverb which hasn't been discussed in this grammar--the kind that generally tells from what point rather than toward what point. Your students shouldn't be held responsible for it, but it will be interesting to see what they do with it, and you will perhaps want to discuss it with them briefly.)

3. Q + NP + past + Vtr + NP $\xRightarrow{T_Q}$

She baked a pizza.

(Q) past + do + NP + Vtr + NP

Did she bake a pizza?

4. Q + NP + pres + Vi + Man $\xRightarrow{T_Q}$

Joe drives dangerously.

(Q) pres + do + NP + Vi + Man

Does Joe drive dangerously?

5. Q + NP + past + Vtr + NP $\xRightarrow{T_Q}$

The skunk discouraged him.

(Q) past + do + NP + past + Vtr + NP

Did the skunk discourage him?

p. 46.

The discussion questions at the top of this page draw together the facts which have been demonstrated by the sentences of the exercise. The addition of Q necessitates a reformulation of the T_Q transformation of the previous year. And the square brackets are added. This is a new symbol and a very useful one. It should be pointed out in connection with the similarity between the strings of an interrogative sentence and its corresponding declarative that there are a few sentences in English which appear only in the interrogative. For example:

Does he ever do it?

has no corresponding declarative.

* He ever does it.

Treating this restriction and others like it are important reasons for placing Q in the underlying string. Only in strings with Q can we find ever. And only by transforming the underlying string are we able to generate sentences with ever. Q, of course, is the symbol which triggers the necessary transformation.

Exercise p. 47:

A. 1. NP + pres + be + ing + Vi + Loc

The boys are sparring in the gym.

Q + NP + pres + be + ing + V_i + Loc $\xrightarrow{T_Q}$

Q+pres + be + NP + ing + Vi + Loc

Are the boys sparring in the gym?

2. NP + past + Vtr + NP

Jeannie dyed her hair.

Q + NP + past + Vtr + NP $\xrightarrow{T_Q}$

(Q) past + do + NP + Vtr + NP

Did Jeannie dye her hair?

3. NP + pres + have + en + Vtr + NP

The advisor has called a meeting.

Q + NP + pres + have + en + Vtr + NP $\xrightarrow{T_Q}$

(Q) pres + have + NP + en + Vtr + NP

Has the advisor called a meeting?

9. NP + pres + M + Be + Adj
You will be sorry.
Q + NP + pres + M + Be + Adj $\overset{T_Q}{\Longrightarrow}$
(Q) pres + M + NP + Be + Adj
Will you be sorry?

5. NP + pres + be + ing + Vtr + NP
The elephants are eating peanuts.
Q + NP + pres + be + ing + Vtr + NP $\overset{T_Q}{\Longrightarrow}$
(Q) pres + be + NP + ing + Vtr + NP
Are the elephants eating peanuts?

B. 1. Q + NP + pres + M + Vtr + NP $\overset{T_Q}{\Longrightarrow}$
(Q) pres + M + NP + Vtr + NP
Will you pass the potatoes?

2. NP + past + Vid + Dir
The climber fell into the crevice.

3. Q + NP + past + Vtr + NP + Tm $\overset{T_Q}{\Longrightarrow}$
(Q) past + do + NP + Vtr + NP + Tm
Did they reach him last night?

4. NP + pres + have + en + Vtr + NP
He has seen the report.

5. NP + pres + Vtr + NP + Man
David composes music easily.

6. Q + NP + pres + have + en + Vtr + NP $\overset{T_Q}{\Longrightarrow}$
(Q) pres + have + NP + en + Vtr + NP
Has the band learned the selection?

7. Q + NP + past + M + Vtr + NP $\overset{T_Q}{\Longrightarrow}$
(Q) past + M + NP + Vtr + NP
Should we decorate the hall?

C. (Note: There is a typographical error in the first string of this exercise. There should be only one NP at the beginning: NP + past + write + NP)

Answers will, of course, vary, since they will be original sentences, but it is important that any string which has Q go through T_Q. More and more your students should be seeing that transformations operate on the underlying strings.

Some possible sentences follow.

1. NP + past + write + NP
   The man wrote a letter.
2. Q + NP + past + write + NP $\xRightarrow{T_Q}$
   (Q) past + do + NP + write + NP
   Did the man write a letter?
3. NP + pres + have + en + Vlnk + Pr
   The cook has become fat.
4. Q + NP + pres + have + en + Vlnk + Pr $\xRightarrow{T_Q}$
   (Q) pres + have + NP + en + Vlnk + Pr
   Has the cook become fat?
5. Q + NP + past + be + ing + Vtr + NP + Man $\xRightarrow{T_Q}$
   (Q) past + be + NP + ing + Vtr + NP + Man
   Was the farmer drilling a well eagerly?
6. Q + NP + past + M + have + en + Vin + Man $\xRightarrow{T_Q}$
   (Q) past + M + NP + have + en + Vin + Man
   Would he have gone willingly?
7. NP + pres + Vmid + NP
   The book has merit.
8. NP + pres + have + en + Be + Pr
   We have been at home.

Pages 45-49:

The discussion on these pages is a review whose purpose is to point up the basic similarity of all questions, by showing that they all are built on the yes-or-no question transformation. The important thing is to see that a general rule can account for many apparently different kinds of sentences. And this is, of course, one of the things a transformational grammar tries to do. There would be little advantage in making a different rule for each kind of question, but when an economy can be achieved by making one rule do for many different kinds, there is the obvious advantage of simplicity and, hopefully, of achieving a deeper understanding of the order of the language.

Exercise 3, pp. 49-50:

1. Who locked the door quickly?
2. How did Martha lock the door?
3. Where did she run?
4. Whom did Bill call?
5. When did Bill call the police?
6. When did the bulldozers begin to arrive?
7. What are the bulldozers moving?
8. Who has a bulldozer?
9. Where have the workmen arrived?
10. How will they remove the bomb?

Exercise 4, p. 50:

Answers will vary but the kinds of questions and the elements replaced should be as follows:

1. Wh-question--NP^2 or direct object Noun Phrase
2. Wh-question--subject NP
3. Wh-question--time adverbial
4. Wh-question--manner adverbial
5. Wh-question--subject NP
6. Wh-question--NP^2 or direct object Noun Phrase
7. Wh-question--manner adverbial
8. Wh-question--subject NP
9. Wh-question--NP^2 or direct object Noun Phrase
10. Wh-question--NP^2 or direct object NP
11. Wh-question--subject NP
12. Wh-question--locative adverbial
13. Wh-question--NP^2 or direct object NP
14. Wh-question--time adverbial
15. Wh-question--locative adverbial

Pages 50-54:

The discussion which begins at the bottom of page 50 deals with symbolizing the steps that occur in the production of wh-questions and the formulation of the rule. This is in one sense a review of the question unit in Language II, but it reformulates the rule to take account of the Question element in the kernel sentence. It also adds the useful symbol of the square bracket. It would probably be most useful to use the material on these pages as a class discussion and work out the sentences with the class.

Exercise 5, pp. 54-55:

This exercise deals with the underlying structure of a sentence, which is, of course, one of the most important concepts of the grammar: the sentences of our language involve a great deal of structure which is not always immediately apparent on the surface. And yet it is the underlying structure which explains why sentences are built the way they are, why we accept one sentence as grammatical and another not, and why sentences are sometimes ambiguous.

1. Q + the boy + past + steer + the boat + skillfully $\xRightarrow{T_Q}$

   past + do + the boy + steer + the + boat + skillfully.

   Did the boy steer the boat skillfully?

2. Q + the + boy + past + steer + wh-NP^2 + skillfully. $\xRightarrow{T_Q}$

   past + do + boy + steer + wh-NP^2 + skillfully. $\xRightarrow{T_{wh}}$

   wh-NP^2 + past + do + the + boy + steer + skillfully.

   What did the boy steer skillfully?

3. Q + the monk + plur + past + engrave + the manuscript + wh-Man $\xRightarrow{T_Q}$

   past + do + the monks + engrave + the manuscript + wh-Man $\xRightarrow{T_{wh}}$

   wh-Man + past + do + the monks + engrave + the manuscript.

   How did the monks engrave the manuscript?

4. Q + wh-NP + pres + be + ing + whistle + in the park $\xRightarrow{T_Q}$

   pres + be + wh-NP + ing + whistle + in the park. $\xRightarrow{T_{wh}}$

   wh-NP + pres + be + ing + whistle + in the park.

   Who is whistling in the park?

5. Q + The bird + pres + be + ing + whistle + wh-Loc $\xrightarrow{T_Q}$

Pres + be + The bird + ing + whistle + wh-Loc $\xrightarrow{T_{wh}}$

wh-Loc + pres + be + the bird + ing + whistle

Where is the bird whistling?

6. Q + wh-NP + pres + have + en + arrive + on time. $\xrightarrow{TQ}$

pres + have + wh-NP + en + arrive + on time. $\xrightarrow{T_{wh}}$

wh-NP + pres + have + en + arrive + on time.

Who has arrived on time?

7. Q + The grandparents + have + en + arrive + wh-Tm. $\xrightarrow{T_Q}$

pres + have + The grandparents + en + arrive + wh-Tm $\xrightarrow{T_{wh}}$

wh-Tm + pres + have + the grandparents + en + arrive.

When have the grandparents arrived?

8. Q + The movie + past + amuse + wh-NP^2 $\xrightarrow{T_Q}$

past + do + the movie + amuse + wh-NP^2 $\xrightarrow{T_{wh}}$

wh-NP^2 + past + do + the movie + amuse

Whom did the movie amuse?

Exercise 6, p. 55:

This exercise is the opposite of the preceding one. It works from sentence back to kernel. But its purpose is the same: to give the student practice in recognizing the underlying structure.

The example has had a step omitted. It should look like this:

Q + NP + have + en + cook + NP^2 + Tm

#Q + you have cooked something today $\xrightarrow{T_Q}$

pres + have + NP + en + cook + NP^2 + Tm

Have you cooked something today $\xrightarrow{\text{wh attachment}}$

pres + have + NP + en + cook + wh-NP^2 + Tm

*Have you cooked what today $\xrightarrow{T_{wh}}$

wh-NP^2 + pres + have + NP + en + cook + Tm

What have you cooked today?

1. Q + NP + pres + have + en + finish + NP2 $\xRightarrow{T_Q}$
Q + The boy has finished the model

pres + have + NP + en + finish + NP^2
Has the boy finished the model?

#2. Q + NP + pres + have + en + finish + NP^2 $\xRightarrow{T_Q}$
Q + The boy has finished something

pres + have + NP + en + finish + NP^2 $\xRightarrow{\text{wh attachment}}$
Has the boy finished something

pres + have + NP + en + finish + wh-NP^2 $\xRightarrow{T_{wh}}$
*Has the boy finished what

wh-NP^2 + pres + have + NP + en + finish
What has the boy finished ?

#3. Q + NP + pres + M + Vid + Dir + Tm $\xRightarrow{T_Q}$
Q + We will go to town at sometime

pres + M + NP + Vid + Dir + Tm $\xRightarrow{\text{wh attachment}}$
Will we go to town at sometime

pres + M + NP + Vid + Dir + wh-Tm $\xRightarrow{Twh}$
*Will we go to town when

wh-Tm + pres + M + NP + Vi d + Dir
When will we go to town?

#4. Q + NP + past + Vtr + NP^2 + Loc $\xRightarrow{T_Q}$
Q + Mary found something in the basket.

past + NP + Vtr + NP^2 + Loc $\xRightarrow{\text{wh attachment}}$
*Mary find something in the basket

past + NP + Vtr + wh-NP^2 + Loc $\xRightarrow{T_{wh}}$
*Mary find what in the basket

wh-NP^2 + past + do + NP + Vtr + Loc
#What did Mary find in the basket?

(# Actually the addition of do is a separate transformation, but we haven't formalized it yet. We have made the point that it should be added after the other transformations; so we have left the place where it goes blank and put it in in the last step. Perhaps students can be led to see, in this way, that the tense has nothing to attach to until the do has been added and that without it the transformed sentences are not grammatical.)

#5. Q + NP + pres + be + ing + Vi + Loc $\xrightarrow{TQ}$
Q Someone is running around the track

pres + be + NP + ing + Vi + Loc $\xrightarrow{\text{wh attachment}}$
Is someone running around the track?

pres + be + wh-NP + ing + Vi + Loc $\xrightarrow{T_{wh}}$
*Is who running around the track?

wh-NP + pres + be + ing + Vi + Loc
Who is running around the track?

#6. Q + NP + pres + have + en + Vtr + NP^2 $\xrightarrow{T_Q}$
Q + The girl has invited someone

pres + have + NP + en + Vtr + NP^2 $\xrightarrow{\text{wh attachment}}$
Has the girl invited someone?

pres + have + NP + en + Vtr + wh-NP^2 $\xrightarrow{T_{wh}}$
*Has the girl invited whom?

wh-NP^2 + pres + have + NP + en + Vtr
Whom has the girl invited?

#7. Q + NP + pres + Be + wh-Loc $\xrightarrow{T_Q}$
Q + The chalk is someplace

pres + Be + NP + Loc $\xrightarrow{\text{wh attachment}}$
Is the chalk someplace?

pres + Be + NP + wh-Loc $\xrightarrow{T_{wh}}$
*Is the chalk where?

wh-Loc + pres + Be + NP
Where is the chalk?

8. Q + NP + pres + Vi + Man $\overset{T_Q}{\Longrightarrow}$
Q + Joyce + writes in some manner.

pres + NP + Vi + Man $\overset{\text{wh attachment}}{\Longrightarrow}$
*Joyce writes in some manner

pres + NP + Vi + wh-Man $\overset{T_{wh}}{\Longrightarrow}$
*Joyce writes how

#wh-Man + pres + do + NP + Vi
How does Joyce write?

(#See the note to 4 above.)

9. Q + NP + pres + have + en + be + ing + Vtr + NP^2 $\overset{T_Q}{\Longrightarrow}$
Q + Someone has been using this typewriter.

pres + have + NP + en + be + ing + Vtr + NP^2 $\overset{\text{wh attachment}}{\Longrightarrow}$
Has someone been using this typewriter?

pres + have + NP + en + be + ing + Vtr + NP^2 $\overset{T_{wh}}{\Longrightarrow}$
*Has who been using this typewriter?

wh-NP + pres + have + en + be + ing + Vtr + NP^2
Who has been using this typewriter?

10. Q + NP + pres + M + Vtr + NP^2 $\overset{T_Q}{\Longrightarrow}$
Q + The government will refund your money.

pres + M + NP + Vtr + NP^2
Will the government refund your money?

#(When we reconstruct the underlying structure for sentences such as those in the example and in 2, 3, 4, 5, 6, 7, 8, and 9 of this exercise where there are question words such as who, whom, what, where, when, and how, we know that the words have replaced an element in the underlying source and we know what that element was--a NP, or Loc, Tm, or Man. But we can't know what specific NP or Loc, etc., might have existed. Therefore we can only use an indefinite NP or Loc, etc. We can say that underlying who or whom is someone; underlying where is some place, etc. This is a concept which has broad implications.)

Cumulative review, p. 56:

(This is a time consuming exercise. You might want to assign the sentences to small groups and have each group explain the one they have worked out.)

1. NP + pres + have + en + Vt_{io} + prep + NP^3 +
The teacher has given to the class
NP^2
an assignment.

NP + pres + Be + Adj
The teacher is new.

by adj. embedding ⇒

NP + wh-NP + pres + Be + Adj + pres + have +
The teacher who is new has
en + Vtio + prep + NP^3 + NP^2
given to the class an assignment.

by deletion ⇒

NP + Adj + pres + have + en + Vtio +
*The teacher new has given
prep + NP^3 + NP^2
to the class an assignment.

by repositioning ⇒

#T + Adj + N + N^o + pres + have + en + Vtio +
The new teacher has given
prep + NP^3 + NP^2
to the class an assignment.

NP + pres + Be + Adj.
The assignment is hard.

by adj. embedding ⇒

T + Adj. + N+ N^o + pres + have + en + Vtio + prep + NP^3 +
The new teacher has given to the class
NP^2 + wh-NP + pres + be + Adj.
an assignment which is hard.

by deletion ⇒

$T + Adj + N + N^o + pres + have + en + V_{tio}$
*The new teacher has given

$prep + NP^3 + NP^2 + Adj$
to the class an assignment hard $\xRightarrow{\text{repositioning}}$

$T + Adj + N + N^o + pres + have + en + V_{tio} +$
The new teacher has given

$prep + NP^3 + T + Adj + N + N^o$
to the class a hard assignment. $\xRightarrow{\text{deletion of prep.}}$

$T + Adj + N + N^o + pres + have + en + V_{tio} + NP^3 +$
The new teacher has given the class

$T + Adj + N + N^o$
a hard assignment.

(#When the adjective is repositioned before the noun, it, of course, comes between the determiner and noun. Thus, in this step NP $\Longrightarrow$ $T + N + N^o$. When the adjective hard is repositioned the determiner must become a.)

2\.

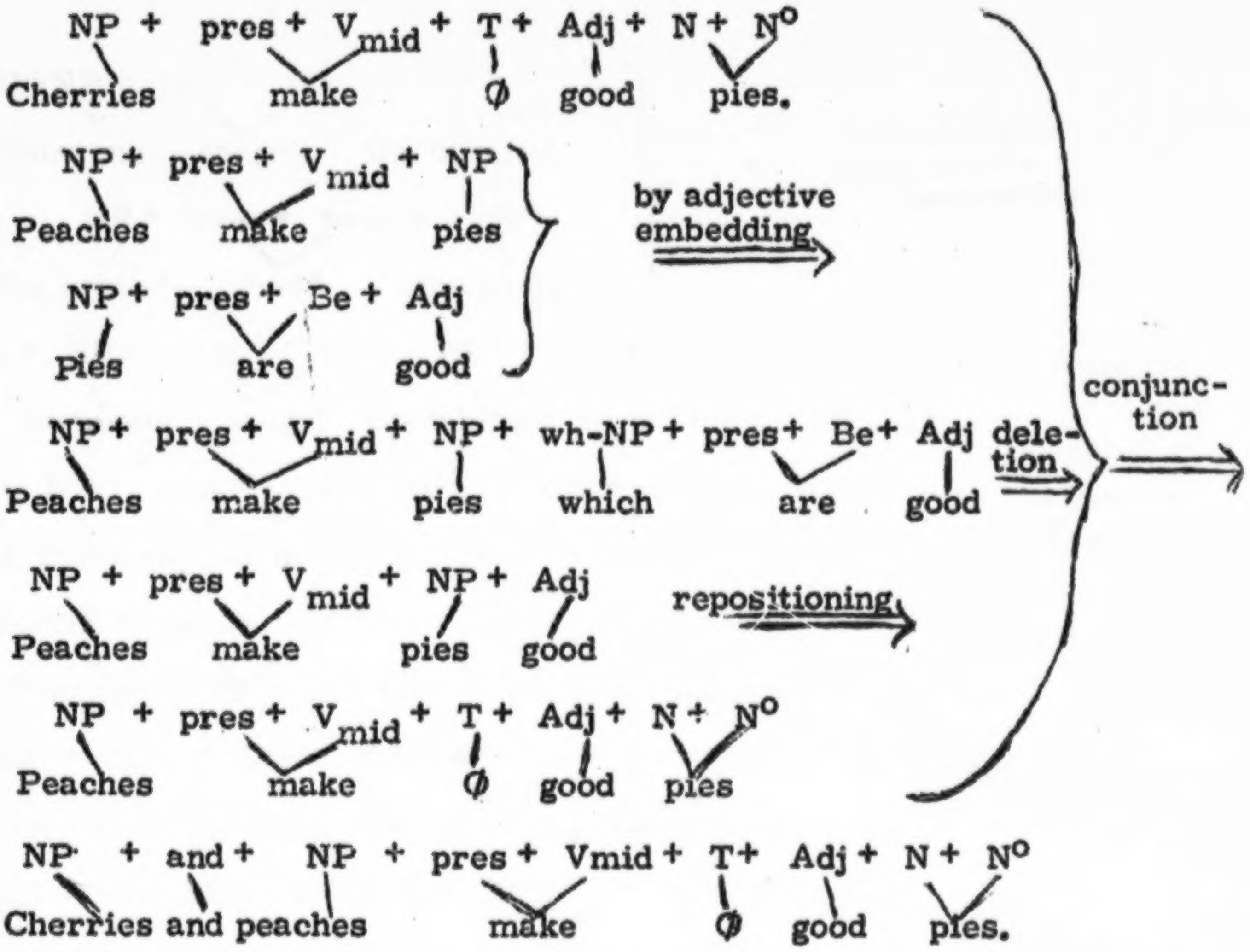
$NP + pres + V_{mid} + NP$
Cherries make pies

$\xRightarrow{\text{by adjective embedding}}$

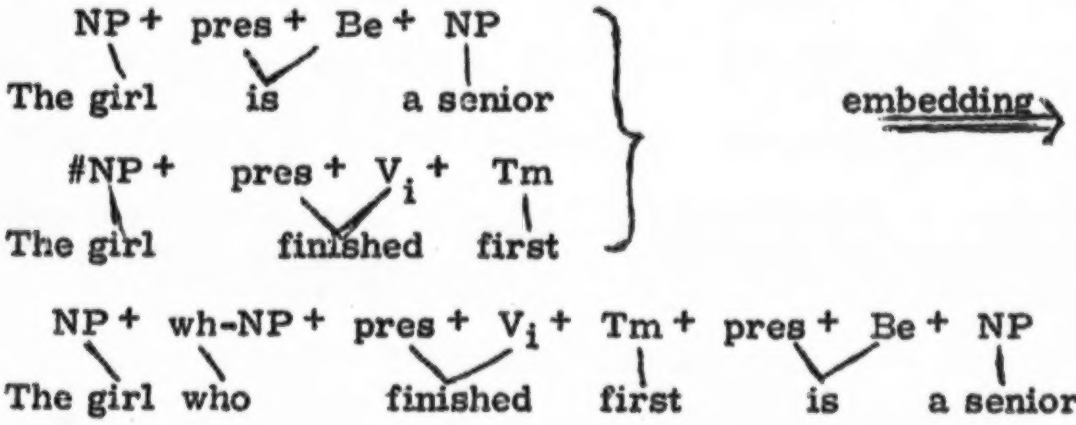
$NP + pres + Be + Adj$
Pies are good

$NP + pres + V_{mid} + NP + wh\text{-}NP + pres + Be + Adj$
Cherries make pies which are good $\xRightarrow{\text{deletion}}$

$NP + pres + V_{mid} + NP + Adj$
Cherries make pies good $\xRightarrow{\text{repositioning}}$


NP + pres + V mid + T + Adj + N + N°
Cherries make Ø good pies.
NP + pres + V mid + NP
Peaches make pies
NP + pres + Be + Adj
Pies are good
by adjective embedding
NP + pres + V mid + NP + wh-NP + pres + Be + Adj
Peaches make pies which are good
deletion
NP + pres + V mid + NP + Adj
Peaches make pies good
repositioning
NP + pres + V mid + T + Adj + N + N°
Peaches make Ø good pies
conjunction
NP + and + NP + pres + Vmid + T + Adj + N + N°
Cherries and peaches make Ø good pies.

3.



(#The source sentence The girl finished first is not, obviously, an NP + Aux + Be + Pr sentence, which is the kind the student has had experience with. However, the embedding process is exactly the same. The only condition is that the NP of the consumer after which the source is embedded must be identical to the NP subject of the source. In this case girl in the consumer is identical to girl in the source)

4. Q + NP + past + Vtr + NP^2
#Q + Someone caught the bouquet.

NP + pres + have + NP
The bride has the bouquet.

Embedding of have source ⟹

Q + NP + past + Vtr + NP^2 + wh-NP + NP + pres + have
Q Someone caught the bouquet which the bride has

Deletion ⟹

Q NP + past + Vtr + NP^2 + NP + pres + have
Q Someone caught the bouquet the bride has

Repositioning ⟹

#Q+NP + past + Vtr + T + NP + s + N + N^o
#Q+Someone caught the bride's bouquet

T_Q ⟹

past + NP + Vtr + T + NP + s + N + N^o
past someone catch the bride's bouquet

wh attachment ⟹

past + wh- NP + Vtr + T + NP + s + N + N^o
past + who + catch the bride's bouquet

T_{wh} ⟹

wh-NP + past + Vtr + T + NP + s + N + N^0
Who caught the bride's bouquet?

(# When the repositioning of bride + has takes place, it replaces the determiner of the bride. Therefore NP must be rewritten as T + N + N^o in this step.

. . . T + N + N^o + NP + pres + has
The bouquet the bride has ⟹

. . . NP + s + N + N^o . . .)
The bride's bouquet

5. (An interesting problem of the order of transformations arises in this sentence. Actually there are a number of transformations involved: the passive, an adjective embedding, T_Q, and T_{wh} leading to the when question. You can discover by trial and error that if the adjective is embedded first we have to move it along with the rest of NP^2 in the passive and question transformations, since it would now bea part of that NP. It may be simpler, therefore, to embed it afterwards. As we work with more complicated sentences involving several transformations, this problem of the order will appear more often. Students should begin to realize that it is important in preparation for a unit on the ordering of transformations in Language V.)

Q + NP + pres + have + en + Vtr + NP^2 + Tm $\xRightarrow{T_{Passive}}$
#Q + Someone has painted the house at sometime.

Q + NP^2 + pres + have + en + be + en + Vtr +
Q The house has been painted

by + NP^1 + Tm $\xRightarrow{\text{deletion}}$
by someone at sometime.

Q + NP^2 + pres + have + en + be + en + Vtr + Tm $\xRightarrow{T_Q}$
Q + The house has been painted at sometime.

Pres + have + NP + en + be + en + Vtr + Tm # $\xRightarrow{T_{wh}}$
Has the house been painted at sometime?

wh-Tm + pres + have + NP + en + be + en + Vtr
When has the house been painted?

NP + pres + Be + Adj $\xRightarrow{\text{adjective embedding}}$
The house is yellow.

wh-Tm + pres + have + NP + wh-NP + pres + Be + Adj + $\xRightarrow{\text{deletion}}$
When has the house which is yellow

en + Be + en + Vtr
been painted?

wh- Tm + pres + have + NP + Adj + en + be + en + Vtr $\xRightarrow{\text{repositioning}}$
* When has the house yellow been painted?

wh-Tm + pres + have + T + Adj + N + N^o + en + be + en + Vtr
When has the yellow house been painted?

(# The Q must be carried along in the strings until the transformation which it indicates has been performed. Then it may be carried or dropped.

Because Adj is placed between the determiner and noun, NP must be rewritten T + N + N^o when that step takes place.)

#(Actually the wh-attachment has been telescoped into this step. You will probably want to have your students include it between T_Q + T_{wh}.

Pres + have + NP + en + be + en + Vtr + wh-Tm
Has the house been painted when?)

THE NEGATIVE

This unit considers primarily the simple negative formed with not. The different treatment of strings like

$$\text{A)} \ldots \text{Tns} + \left\{\begin{matrix}\text{be}\\ \text{have}\\ \text{M}\end{matrix}\right\} \ldots$$

and those like

$$\text{B)} \ldots \text{Tns} + \text{Vrb} \ldots$$

in regard to the negative is the most important concept of this unit. The treatment of B) occasions the insertion of do as support for a Tns which has no place to attach itself. The negative transformation inserts Neg in strings like B) in a position right after Tns. Not however cannot be past or pres. Do is thus introduced by

$$T_{do} \qquad \text{Tns} \Longrightarrow \text{Tns} + \text{do}$$

where Tns is not followed by be, have, M, or Vrb. But T_{do} is not a transformation which is necessary simply in negative sentences. Yes-or-no questions sometimes require it also. Note that questions of this type invert:

$$\text{Tns} + \left\{\begin{matrix}\text{be}\\ \text{have}\\ \text{M}\end{matrix}\right\} \ldots \text{and } NP_1$$

NP + Tns + be . . . ⟹ Tns + be + NP . . .
He is going ⟹ Is he going

NP + Tns + have . . . Tns + have + NP . . .
He has gone Has he gone

NP + Tns + M . . . ⟹ Tns + M + NP . . .
He should go Should he go

However, where a string has the form NP + Tns + Verb only the Tns and NP are inverted:

NP + Tns + Vin ⟹ Tns + NP + Vin
He went *Tns + he go

T_{do} then operates since he is not be, have, M, or Vrb (and of course Tns cannot attach to he.)

$$\text{Tns} + \text{he} \Longrightarrow \text{Tns} + \text{do} + \text{he}$$

with this result

Past + do + he + go
Did he go?

Other structural changes, such as emphasis, also require the operation of do - support.

He + tns + emphasis + go ⟹ He did go.

But we won't attempt to formulate this use at this time.

ANSWERS TO EXERCISES

May we suggest that you work through the material on pp. 1 - 5 with your class. Each step in the process of formulating the rule is worked out as a guide for you to use and, of course, for the students to refer to. But they will probably be more clear if you can use the board to illustrate each one and to get the students to think them through.

Exercise pp. 57-58 :

1. NP + pres + be + ing + Vin ⟹ NP + pres + be + Neg + ing + Vin
Tom is going. ⟹ Tom is not going.

2. NP + past + M + Vtr + NP^2
The driver could explain the accident. ⟹

NP + past + M + Neg + Vtr + NP^2
The driver could not explain the accident.

3. NP + past + have + en + Vtr + NP^2 + Loc
I had made an A in History. ⟹

NP + past + have + Neg + en + Vtr + NP^2 + Loc
I had not made an A in History.

4. NP + past + M + Vtr + NP^2
Basil would meet the requirements. ⟹

NP + past + M + Neg + Vtr + NP^2
Basil would not meet the requirements.

5. NP + pres + have + en + Vtr + NP^2
This has solved our problem. ⟹

NP + pres + have + Neg + en + Vtr + NP^2
This has not solved our problem.

6. NP + pres + M + Vid + Dir
The boys will go to the game. ⟹

NP + pres + M + Neg + Vid + Dir
The boys will not go to the game.

7. NP + past + be + ing + Vtr + NP^2
Alice was attending the play. ⟹

NP + past + be + Neg + ing + Vtr + NP^2
Alice was not attending the play.

Students will find that not is always inserted after have, be, and M to produce grammatical negative sentences.

Exercise p. 59 :
This exercise proves that Tns cannot attach to not.

1. NP + past + Vlnk + Adj ⟹ NP + past + Neg +
The child became ill. ⟹ *The child ? not
Vlnk + Adj.
become ill

2. NP + past + Be + Adj. ⟹ NP + past + Be + Neg + Adj.
The child was ill. ⟹ The child was not ill.

3. NP + past + Vmid NP^2 ⟹ NP + past + Neg
The paper cost a quarter. ⟹ * The paper ? not
Vmid + NP^2
cost a quarter

4. NP + pres + Vtr + NP^2 + Man (or Adj + ly) ⟹
Jack picks strawberries reluctantly.
NP + pres + Neg + Vtr + NP^2 + Man
*Jack ? not pick strawberries reluctantly

5. NP + pres + Be NP (or Pr) ⟹ NP + pres + Be + Neg
I am your responsibility. ⟹ I am not
NP (or Pr)
your responsibility.

6. NP + past + Vin + Man + Loc ⟹
The candle glowed dimly in the dark.
NP + past + Neg + Vin + Man + Loc
* The candle ? not glow dimly in the dark.

Exercise p. 61 :
1. NP + past + do + Neg + Vlnk + Adj. ⟹
The child did not become ill.

3. NP + past + do + Neg + Vmid + NP^2
The paper did not cost a quarter.

4. NP + pres + do + Neg + Vtr + NP^2 + Man $\Longrightarrow$
Jack does not pick strawberries reluctantly.

6. NP + past + do + Neg + Vin + Man + Loc
The candle did not glow dimly in the dark.

Exercise p. 32 :

Our concern in this exercise is with do support and in formalizing the occasions when the negative transformation makes it necessary.

1. NP + past + Vtdir + NP^2 + Dir $\xRightarrow{T_{Neg}}$
The rain knocked the flowers to the ground.
NP + past + Neg + Vtdir + NP^2 + Dir $\xRightarrow{T_{do}}$
NP + past + do + Neg + Vtdir + NP^2 + Dir
The rain did not knock the flowers to the ground.

2. NP + pres + M + Vtr + NP^2 + Loc $\xRightarrow{T_{Neg}}$
The team will hold a rally in the gym.
NP + pres + M + Neg + Vtr NP^2 + Loc
The team will not hold a rally in the gym.

3. NP + past + Vtr + NP^2 + Loc $\xRightarrow{T_{Neg}}$
Kofax pitched a no-hitter in Minneapolis.
NP + past + Neg + Vtr + NP^2 + Loc $\xRightarrow{T_{do}}$
NP + past + do + Neg + Vtr + NP^2 + Loc
Kofax did not pitch a no-hitter in Minneapolis.

4. NP + pres + Vid + Dir + Tm $\xRightarrow{T_{Neg}}$
Lorna goes to our school this year.
NP + pres + Neg + Vid + Dir + Tm $\xRightarrow{T_{do}}$
NP + pres + do + Neg + Vid + Dir + Tm
Lorna does not go to our school this year.

5. NP + pres + Vtr + NP^2 + Tm $\xRightarrow{T_{Neg}}$

The cafeteria serves fish on Friday.

NP + pres + Neg + Vtr + NP^2 + Tm $\xRightarrow{T_{do}}$

NP + pres + do + Neg + Vtr + NP^2 + Tm

The cafeteria does not serve fish on Friday.

Exercise p. 64 :

1. The puppy followed the children to school. (NP + Tns + Vt_{dir} + NP^2 + Dir)

The puppy did not follow the children to school. $\xRightarrow{T_{Neg}}$
(Neg + NP + Tns + Vtdir + NP^2 + Dir)

NP + Tns + Neg + Vtdir + NP^2 + Dir $\xRightarrow{T_{do}}$

NP + Tns + do + Neg + Vtdir + NP^2 + Dir

The puppy did not follow the children to school.

2. Many teenagers dunk french fries in catsup. (NP + Tns + Vtr + NP^2 + Dir)

Many teenagers do not dunk french fries in catsup. $\xRightarrow{T_{Neg}}$
(Neg + NP + Tns + Vt_{dir} + NP^2 + Dir)

NP + Tns + Neg + Vt_{dir} + NP^2 + Dir $\xRightarrow{T_{do}}$

NP + Tns + do + Neg + Vt_{dir} + NP^2 + Dir

Teenagers do not dunk french fries in catsup.

3. The culprit could explain everything. (NP + Tns + M + Vtr + NP^2)

The culprit could not explain everything. $\xRightarrow{T_{Neg}}$
(Neg + NP + Tns + M + Vtr + NP^2)

NP + Tns + M + Neg + Vtr + NP^2

The culprit could not explain everything.

4. We saluted the flag during the ceremony. (NP + Tns + Vtr + NP^2 + Tm)

We did not salute the flag during the ceremony. $\xRightarrow{T_{Neg}}$
(Neg + NP + Tns + Vtr + NP^2 + Tm)

NP + Tns + Neg + Vtr + NP^2 + Tm $\xRightarrow{T_{do}}$

NP + Tns + do + Neg + Vt + NP^2 + Tm

We did not salute the flag during the ceremony.

5. His uniform was spotless. (NP + Tns + Be + Adj.)
His uniform was not spotless.
(Neg + NP + Tns + Be + Adj.) $\xRightarrow{T_{Neg}}$

NP + Tns + Be + Neg + Adj
His uniform was not spotless.

6. The tornado had destroyed the town. (NP + Tns + have + en + Vtr + NP^2)

The tornado had not destroyed the town.
(Neg + NP + Tns + have + en + Vtr + NP^2) $\xRightarrow{T_{Neg}}$

NP + Tns + have + Neg. + en + Vtr + NP^2
The tornado had not destroyed the town.

An exercise in research, p. 34:

Students might be interested in examining the many other ways of making sentences negative. Such a consideration reveals the real complexity of the negative and might include a discussion of

1) the determiner, such as no
2) none (which may result from no + one ⟹ none)
3) nothing (no + thing ⟹ nothing)
4) neither . . . nor
5) never
6) Neg affixes or prefixes, such as non, un, dis, un, etc.

Standard usage frowns upon the use of two negative words in a sentence, but it accepts a negative prefix and a negative word

He is not unwilling.
We are never unwelcome.

7) the tag question which provides a negative tag if the original statement is positive, thus:

He did it, didn't he?
I didn't see it, did you?
He hasn't appeared, has he?

8) the degree to which words like hardly, scarcely, and seldom make a sentence negative.

He seldom goes to games.
He never goes to games.

Exercise pp. 37-68:

1. The team was discouraged. ⟹
The team was not discouraged. ⟹
Wasn't the team discouraged?

2. The repairmen have been working all summer. ⟹
The repairmen have not been working all summer. ⟹
Haven't the repairmen been working all summer?

3. The squirrel raced to the treetop. ⟹
The squirrel did not race to the treetop. ⟹
Didn't the squirrel race to the treetop?

4. Bill is running for president. ⟹
Bill is not running for president. ⟹
Isn't Bill running for president?

5. The nurse discovered the serum in the icebox. ⟹
The nurse did not discover the serum in the icebox. ⟹
Didn't the nurse discover the serum in the icebox?

6. The group will take off in the morning. ⟹
The group will not take off in the morning. ⟹
Won't the group take off in the morning?

7. A bird flew into the attic. ⟹
A bird did not fly into the attic. ⟹
Didn't a bird fly into the attic?

8. This is John's typewriter. ⟹
This is not John's typewriter. ⟹
Isn't this John's typewriter?
(Students will notice that John's is the result of possessive embedding. Further consideration to the order of transformations when several are involved in one sentence will be given in Language V units.)

9. The class has counted the errors. ⟹
The class has not counted the errors. ⟹
Hasn't the class counted the errors?

10. We have been reviewing the exercises. ⟹
We have not been reviewing the exercises. ⟹
Haven't we been reviewing the exercises?

Exercise , p. 38 :

This exercise gives students an opportunity to write transformed strings for questions, negative questions, questions requiring do support, and negative questions requiring do support. Most important is the practice the student has in ordering the steps by which we reach a desired transformation. Sentences for the final transformed strings will vary, but the underlying strings should look like this:

1. $\text{Q} + \text{NP} + \text{past} + \text{have} + \text{en} + \text{Vin} + \text{Man} \quad \xRightarrow{T_Q}$

$\#(\text{Q}) + \text{past} + \text{have} + \text{NP} + \text{en} + \text{Vin} + \text{Man}$

2. $\text{Q} + \text{NP} + \text{pres} + \text{M} + \text{have} + \text{en} + \text{Vlnk} + \text{Adj} \quad \xRightarrow{T_Q}$

$(\text{Q}) + \text{pres} + \text{M} + \text{NP} + \text{have} + \text{en} + \text{Vlnk} + \text{Adj}$

3. Q + NP + pres + Be + NP $\xRightarrow{T_Q}$
(Q)+ pres + Be + NP + NP

4. Neg + NP + past + M + Be + Adj $\xRightarrow{T_{Neg}}$
NP + past + M + Neg + Be + Adj

5. Neg + NP + past + be + ing + Vin + Tm $\xRightarrow{T_{Neg}}$
NP + past + be + Neg + ing + Vin + Tm

6. Neg + NP + pres + Vmid + NP + Loc $\xRightarrow{T_{Neg}}$
NP + pres + Neg + Vmid + NP + Loc $\xRightarrow{T_{do}}$
NP + pres + do + Neg + Vmid + NP + Loc

7. Q + Neg + NP + pres + be + ing + Vtr + NP + Man $\xRightarrow{T_{Neg}}$

(Q)+ NP + pres + be + Neg + ing + Vtr + NP + Man $\xRightarrow{T_Q}$

(Q)+ pres + be + Neg + NP + ing + Vtr + NP + Man

8. Q + Neg + NP + past + M + have + en + Vlnk + Pr $\xRightarrow{T_{Neg}}$

(Q)+ NP + past + M + Neg + have + en + Vlnk + Pr $\xRightarrow{T_Q}$

(Q)+ past + M + Neg + NP + have + en + Vlnk + Pr

9. Q + Neg + NP + past + have + en + Vtr + NP + Loc $\xRightarrow{T_{Neg}}$

(Q)+ NP + past + have + Neg + en + Vtr + NP + Loc $\xRightarrow{T_Q}$

(Q)+ past + have + Neg + NP + en + Vtr + NP + Loc

10. Q + Neg + NP + pres + Vt_{dir} + NP + Dir $\xRightarrow{T_{Neg}}$

(Q)+ NP + pres + Neg + Vt_{dir} + NP + Dir $\xRightarrow{T_Q}$

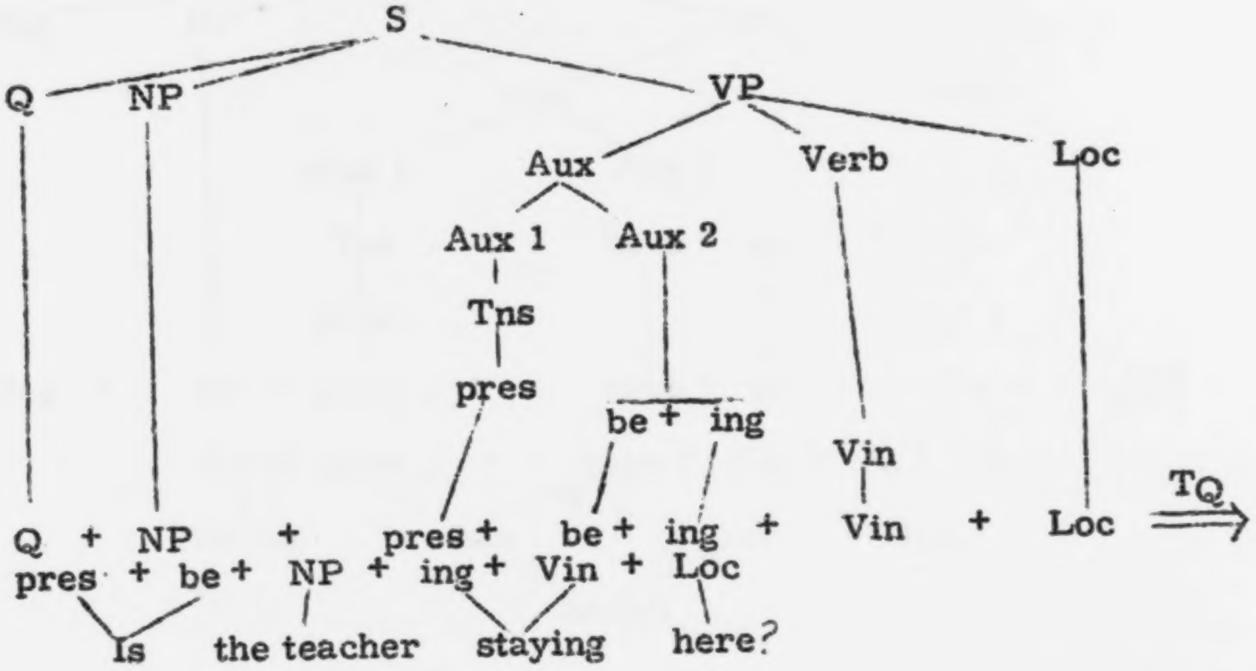
(Q)+ pres + Neg + NP + Vt_{dir} + NP + Dir $\xRightarrow{T_{do}}$

(Q)+ pres + do +Neg + Vt_{dir} + NP + Dir

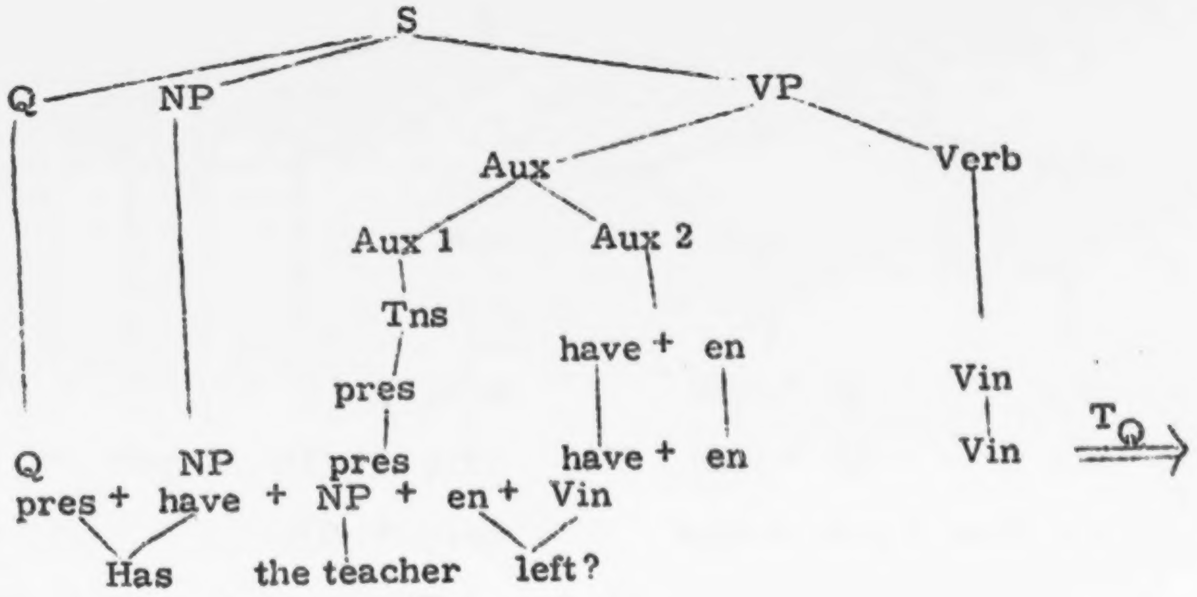
#(The symbol Q may be carried optionally in the strings after the yes-or-no transformation has been performed, or it may be dropped. If it is carried it simply indicates that the sentence will be read as a question, with rising inflection. T_Q simply arranges the elements in the right order.)

Exercise, pp. 38-39:

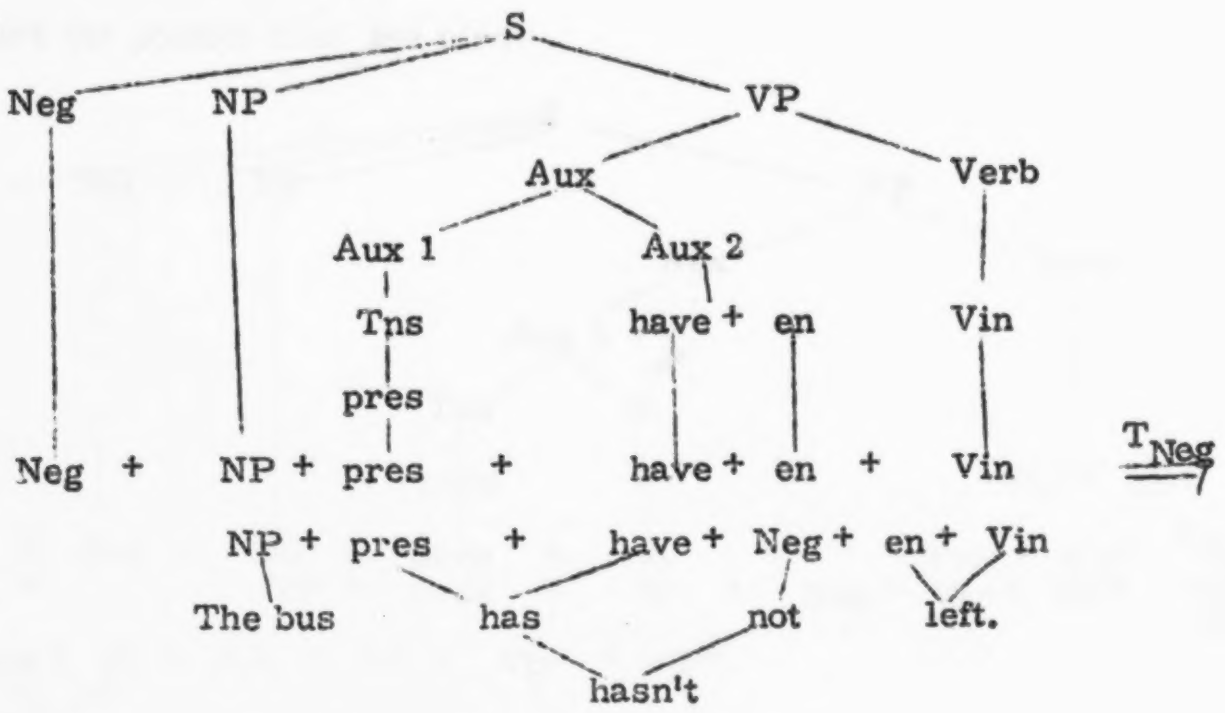
1. Is the teacher staying here?



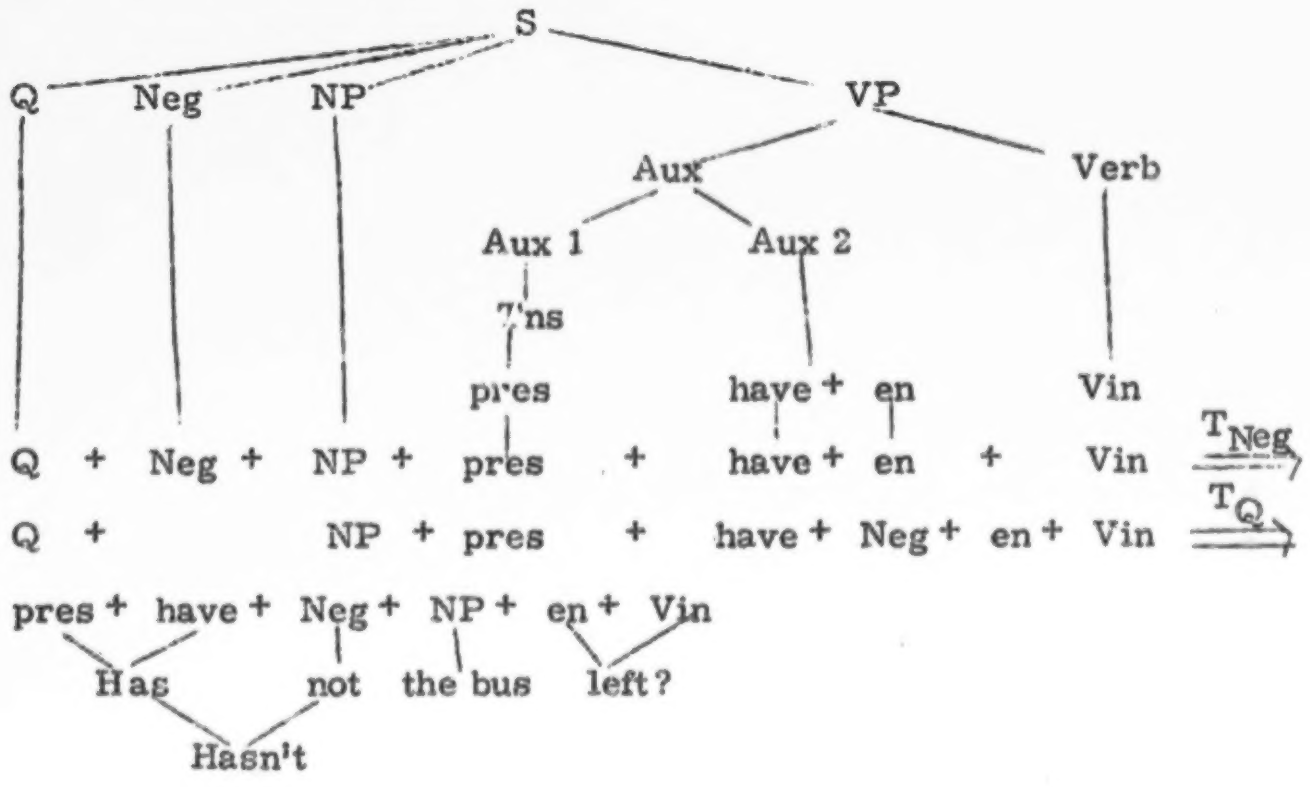
2. Has the bus left?



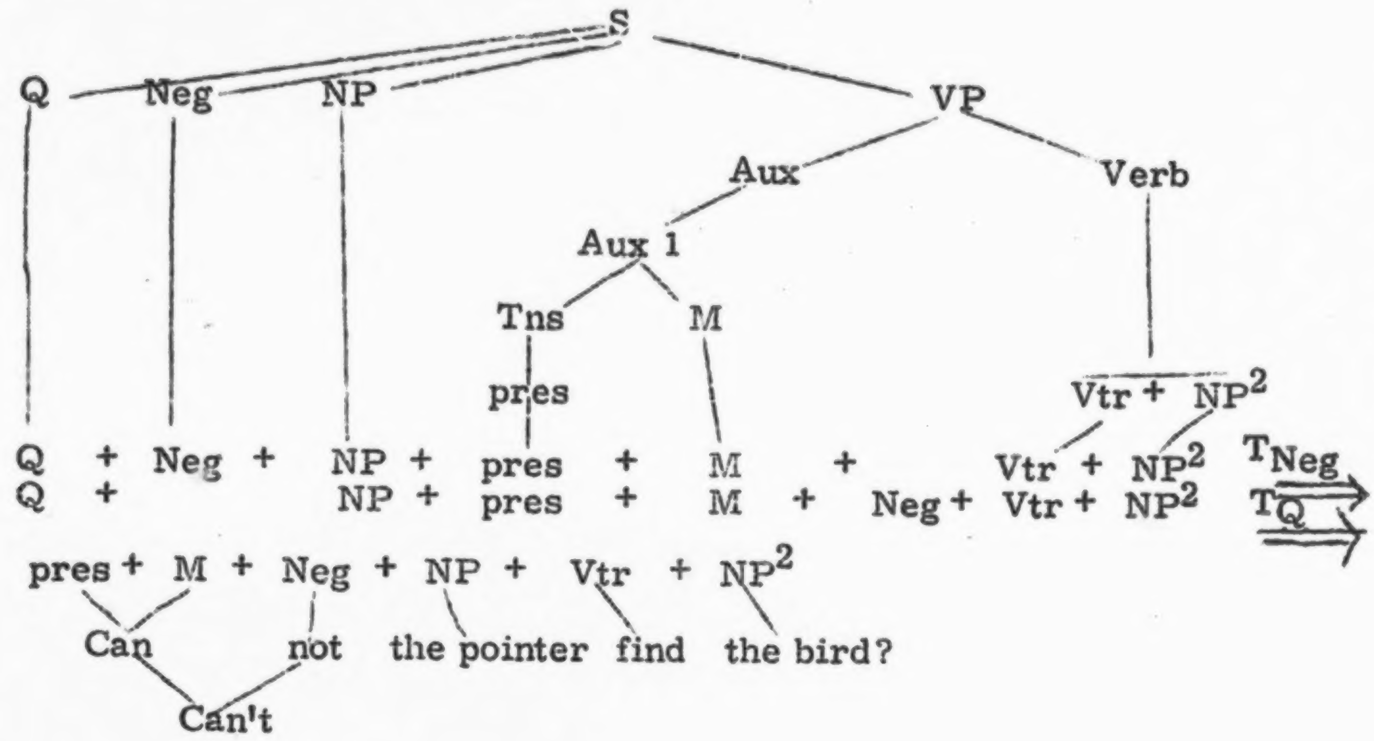
3. The bus hasn't left.



4. Hasn't the bus left?


S
Q
Neg
NP
VP
Aux
Verb
Aux 1
Aux 2
Tns
pres
have + en
Vin
Q + Neg + NP + pres + have + en + Vin
T_{Neg}
Q + NP + pres + have + Neg + en + Vin
T_Q
pres + have + Neg + NP + en + Vin
Has
not
the bus
left?
Hasn't

5. Can't the pointer find the bird?


S
Q
Neg
NP
VP
Aux
Verb
Aux 1
Tns
M
pres
Vtr + NP2
Q + Neg + NP + pres + M + Vtr + NP2
TNeg
Q + NP + pres + M + Neg + Vtr + NP2
TQ
pres + M + Neg + NP + Vtr + NP2
Can
not
the pointer
find
the bird?
Can't